



Topic
History

Subtopic
Ancient History

Lost Worlds of South America

Course Guidebook

Professor Edwin Barnhart
Maya Exploration Center



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Professor Edwin Barnhart is Director of the Maya Exploration Center. He received his Ph.D. in Anthropology with a focus on Archaeology from The University of Texas at Austin in 2001; his dissertation was entitled *The Palenque Mapping Project: Settlement Patterns and Urbanism in an Ancient Maya City*. Professor Barnhart has more than 20 years of experience as an archaeologist, explorer, and instructor in North, Central, and South America and has published more than a dozen papers and given presentations at eight international conferences.

Professor Barnhart's involvement in Maya studies began in 1990 as an archaeological intern in the ruins of Copán, Honduras. In January of 1996, he was invited to return to Copán and help a team from the University of Pennsylvania excavate the early acropolis and the tomb of the city's lineage founder. From 1992 to 1995, Professor Barnhart studied New World art, iconography, and epigraphy (hieroglyphic translation) under the late Dr. Linda Schele at The University of Texas at Austin. During that time, he intensively studied the Andean culture, writing a number of papers about Moche shamanism as seen through art and iconography.

In 1994, Professor Barnhart began working as a surveyor and University of Texas field school instructor in the jungles of northwestern Belize. After finding numerous small villages, he discovered the ancient city of Maax Na ("Spider-Monkey House"), a major center of the Classic Maya period. Professor Barnhart mapped more than 600 structures at Maax Na between 1995 and 1997 before moving his research focus to Chiapas, Mexico. He received his master's degree in Latin American Studies in May of 1996 and began teaching anthropology classes at what is now Texas State University the following September. He taught archaeology and anthropology classes there until 1998, when he was invited by the Mexican government to direct

the Palenque Mapping Project, a three-year effort to survey and map the unknown sections of Palenque's ruins. More than 1,100 new structures were documented, bringing the site total to almost 1,500. The resultant map has been celebrated as one of the most detailed and accurate ever made of a Maya ruin.

In 2003, Professor Barnhart became Director of the Maya Exploration Center, an institution dedicated to the study of ancient Maya civilization. He has led dozens of student groups on journeys through Mexico, Guatemala, Peru, and Bolivia.

Over the last 10 years, Professor Barnhart has appeared multiple times on the History Channel; the Discovery Channel; and NHK, a Japanese public television network. In addition, he is a Fellow of the Explorers Club and teaches University of Texas travel courses for college professors on ancient Andean and Mesoamerican astronomy, mathematics, and culture. ■

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Lost Worlds of South America

Scope:

Did you know that before the first pyramid in Egypt was constructed, thousands of people were already living in stone-built cities in Peru? If not, you're not alone. Very few people realize not only how old but how sophisticated civilization was in ancient South America. This course will introduce you to thousands of years of South American history, much of which has come to light only recently.

The title of this course, *Lost Worlds*, might sound a bit melodramatic, but in the case of South America's history, it's fitting. Cities going back past 3000 B.C. are still lost under the deep sands of the desert coast. Magnificent palaces, such as that at Machu Picchu, are hiding on the peaks and in the valleys of the cloud-covered Andes Mountains. The evidence of an ancient population of millions is being recovered but remains mostly lost under dense rainforest canopy. Much of South America truly is a lost world. In addition to the many aspects of history still to be found through archaeology, the world's museum collections also represent the way in which South America's history has been lost. Most of the vast exhibits of gold, silver, and other precious objects from South America come from looting and grave robbing. The original locations of those thousands of artifacts have been lost and, with them, important clues about their meanings and functions.

This course will lead you, more or less chronologically, through the many cultures that rose and fell during South America's long pre-Columbian history. The pace of archaeological discoveries in what is generally called the "Andean region" has greatly accelerated in recent decades, in some cases, radically changing what is still being printed in textbooks. This course will discuss those new discoveries, bringing viewers up-to-date in a way that few other information sources can. One of the aspects of Andean history that has changed the most in recent times is our understanding of just how far it goes back in time. Peru's coast is now known to be home to the oldest cities in the Americas and among the oldest in the world. South America is also the place in which the famous Monte Verde site represents the oldest known

human habitation in the Americas, baffling archaeologists who believe that the first Americans crossed the Bering Strait.

As you'll learn, South America is home to many firsts. The earliest pottery in the Americas comes, surprisingly, from the Amazon. The New World's first metallurgy, weaving, cultivated plants, and even astronomical observatories also come from South America. And guess where the world's first mummies are found? Despite what you may think, the answer is not Egypt.

South America was home to a wonderful patchwork of cultures, and in many respects, it remains so. Starting as communities of fishermen along the northern coast of Peru, cities, civilizations, and powerful kingdoms spread across the Andes. Sometimes, they clashed with one another and, other times, fell victim to massive natural disasters. Ultimately, they developed into a single empire of more than 10 million people—the Inca. Then, less than 100 years after the Inca Empire was established, Pizarro arrived with a few hundred soldiers and 12 infectious diseases to change South America forever.

This course will discuss not only the various culture groups of South America but also the idea that underlying elements bind them all into a cultural continuum. The ancient people of South America—from the Chavín people of 1000 B.C. to the Chimú people of 1000 A.D.—shared a fundamental vision of the cosmos. Social organization patterns, subsistence strategies, construction techniques, and especially religion were things that all seem to have held in common. This course aims to explore both the amazing archaeological discoveries in South America and, more importantly, what those discoveries tell us about the lives of the world's ancestors from a still poorly understood part of our planet—South America. ■

South America's Lost Cradle of Civilization

Lecture 1

The ancient history of South America is both fascinating and deeply informative, but it has been sadly underrepresented in mainstream accounts of Western history. Few people know the significant scientific, agricultural, and social advancements achieved by ancient South American cultures, and many are unaware of the wide variety of civilizations that flourished across South America's diverse terrain. In this course, we will consider why, despite their importance, these cultures have largely gone unnoticed. Through our examination of their technology, religion, and practices, we will discover not only what is known about them but also what remains unknown.

South America's Undervalued Legacy

- Much of South America's impressive history has gone unnoticed. Did you know that pyramids were being built in Peru hundreds of years before they were built in Egypt? That while Europe was still reeling from the effects of the Black Death, South America was enjoying a golden age and had eradicated hunger in their world? That South America developed a language written in knots—a language that remains one of the world's last undeciphered scripts? These lectures will explore these and many other fascinating aspects of South America's underappreciated legacy.
- South America deserves recognition as one of the cradles of civilization. There are only six places on earth where civilization spontaneously occurred, and South America is one of them. It is part of an elite group that includes China, the Indus Valley, Mesopotamia, Egypt, and Mesoamerica.
- Why do we refer to ancient South America as a “lost world”? South America's terrain has a unique way of hiding its ancient past. There are steep mountains, many of them more than 20,000 feet high. There are deserts; the entire coast of Peru and northern Chile

is covered by one of the driest deserts in the world. There is also dense jungle; in fact, unknown cultures are still living in uncharted regions of the Amazon.

- Any South American archaeologist will tell you that we've barely scratched the surface of what's been lost in South America.
- The evidence of early civilization in South America centers around the Andes Mountains. For that reason, scholars call the collective cultures there the Andean civilization. Peru is the epicenter of the Andean civilization, spreading into modern Bolivia, Chile, and Ecuador. But entirely different borders existed when the Incas ran the show. They called the Andean civilization Tawantinsuyu, "the land of four quarters."
- Why should we care about ancient South America? If we as a people don't know where we came from, how do we know who we are, what mistakes to avoid, and where we should be headed? It is important in today's world to consider our global heritage, and the



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More than 100 uncontacted tribes are known to exist in the Amazonian jungle.

ways in which South American history differs from other cultural history can provide us with invaluable self-knowledge.

Our Approach in These Lectures

- Most people believe that South American history was dominated by the Inca. The reality is that the Inca represent only the last 200 years of a 5,000-year history. This course will indeed teach you about the Inca but not before helping you to understand that they stood upon the shoulders of giants. The cultures that came before the Inca are a rich patchwork of people, ideas, and environmental adaptations.
- We'll talk about the birth of Andean civilization in the northern deserts of Peru. The Andean civilization produced incredible independent inventions—fundamental advancements in agriculture, architecture, textiles, and religion. This civilization gave the world the miracle of the potato, and advances in food production and preservation all but eliminated hunger in South America.
- We'll also talk about the fact that wide-scale civilization is now being found in the Amazon, an area once thought to be untamable by ancient man. It is increasingly apparent that this previously unknown Amazonian settlement was both complex and expansive.
- South America's many cultures are often discussed as separate, isolated groups. But as we look at the archaeology and follow the clues that it provides, we will discover overarching similarities. Though distinct, these cultures all shared fundamental characteristics, such as religion, ideas about community organization, and subsistence strategies.
- Some scholars interpret the evidence of religion in ancient South American cultures as pointing to a polytheistic tradition. These lectures will present a counterargument: that South America was actually one of the few places on the planet where monotheism was practiced and that the origins of South American religion came from a surprising place: the Amazon. In fact, the very origins of

Andean civilization can perhaps be traced not to the Andes but to somewhere deep inside the Amazon.

Sources of Knowledge

- Our knowledge of ancient South America generally comes from three sources: Spanish contact chronicles and reports, archaeology, and modern ethnography.
- Spanish contact reports were numerous but were often written to serve the authors' agendas. Some of them were written by soldiers; these chronicles focused on the quest for gold and land. Other accounts were written by priests seeking to acquire converts and end paganism. Reports were also written by officials sent from the Crown of Spain. To serve the purposes of the Crown, these officials wrote about resources and labor groups.
- As a result of these separate agendas, there were many questions that were never asked, and many of the chronicles conflict with one another. Amazingly, no Spaniard ever really saw the Inca build their incredible walls. No one ever asked them how they wrote in those knotted strings. No one ever asked what they knew about the stars and their methods for observing them.
- Archaeology in South America began in response to the huge amount of gold and other beautiful artifacts being looted from South America, specifically from the coasts of Peru. It was an attempt to find these artifacts before they were all gone. Today, South American archaeology has evolved. Now, it's a fast growing source of information and protection for these beautiful ancient sites.
- Modern ethnography is also a good potential source for understanding the past. Modern descendants have important information to contribute—ideas about how their lives today might relate to the lives of their ancestors.

Highlights to Come

- The momentum of South American archaeology has been such over the last decades that the literature can't keep up. Much of what is in standard textbooks is no longer true. New excavations have produced information that has overturned much of what we use to believe about South America. To explore these new discoveries, we will examine many of the regions and cultures of ancient South America.
- We will talk about Peru's coast, where culture rose and fell like a fireworks show. Though the desert coast of Peru looks like a barren wasteland from satellite images, it's actually riddled with fertile river valleys. The cultures of the coast capitalized on those river valleys, seeking out a resource base through a combination of irrigation canals and marine farming. They made incredible leaps in technology, carved giant geoglyphs into the sand, and built pyramids that towered over the desert floor.
- We'll discuss the highlands of the Andes, where the Inca originated. The advancements of the Inca were adaptations of techniques from people who had lived and learned in the same environment and had perfected ways of living in it for thousands of years before the Inca came into existence.
- We'll also discuss the Amazon, where almost unbelievable things are being discovered. Once thought to be unfarmable, the Amazon has recently revealed evidence of wide-scale civilization. Deep, deep within Brazil's forest, hunter and gatherer groups are being found that date back to 9000 B.C. It would seem that the myths of El Dorado and the lost city of Z might be true after all.

Suggested Reading

Reichel-Dolmatoff, *Amazonian Cosmos*.

Questions to Consider

1. Why has the Western world always omitted pre-Columbian South America from world history textbooks?
2. As an individual, do you consider your heritage to be only your direct hereditary ancestors or human kind in general?

Discovering Peru's Earliest Cities

Lecture 2

In this lecture, we look at the earliest cultures in South America—those along the coast and in the inland valleys. Archaeological evidence shows civilization developing there almost 5,000 years ago, making South America one of the “cradles of civilization.” A strong trade network developed among these cities, especially between the coastal cities with access to seafood and the inland cities that had developed irrigation-based agriculture. The absence of weapons and fortifications indicates that the network was peaceful and cooperative. Some evidence has been found suggesting the early development of religion and astronomy in these cultures, and some compelling artifacts even point to possible contact with the Amazon, but many questions remain unanswered.

South America as a Cradle of Civilization

- A little more than 5,000 years ago, cities built in stone began to appear in the coastal deserts and valleys of northern Peru. It would still be almost 500 years before Imhotep built the first step pyramid in Egypt. This settlement in Peru can rightly be considered a cradle of civilization.
- Though archaeological digs at Aspero in the early 20th century were abandoned because no gold or ceramics were found, archaeologist Michael Mosley returned there in the 1970s with the suspicion that the settlement might be older than previously thought. Mosley found weaved nets, baskets, and fishing equipment but no ceramics or crops.
 - Prior to the 1950s and the invention of carbon-14 dating, many of the preceramic cities were noted with textiles, basic agriculture, and large populations, but no one could determine just how old they were.
 - With the advent of carbon-14 dating, organic materials found at sites can be dated, although the process is neither as

straightforward nor as accurate as you might think. The process relies on the known rate of decay of the isotope carbon 14 after the death of a living organism.

- Carbon-14 dates are accurate to \pm 50 years. A site that has a very strong date will have hundreds of carbon-14 dates.
- Carbon-14 dating confirmed that Aspero dated to at least 2800 B.C. This allowed Mosley to challenge the longstanding theory that urban communities could not develop without the advent of intensive agriculture. Aspero was a community that appeared to achieve a stable food supply and become a sedentary community because of fishing, not planting. Mosley called it the “maritime foundation” of Andean civilization.
- Mosley’s theory enjoyed wide acclaim for a while, until other contemporary cities in the valleys just off the coast were discovered, along with something that Aspero didn’t have: irrigation canals. Unlike the bone-dry desert along the coast, the four valleys of Norte Chico had rivers fed by Andean snowmelt from above. Those water sources made the valleys fertile and allowed the people to farm. Thus, it appears that Aspero and other coastal cities did have an agricultural culture—through trade.

Establishment of Trade

- One of the crops planted in abundance in the inland valleys was cotton. Cotton was essential for all the nets used on the coast, and inland people likely traded it for seafood with the people living on the coast. The coastal people used the cotton to develop a textile industry from scratch, with no apparent previous example.
- Coastal cities and inland valley cities created a trade network, each providing items desired by the other, such as food or nets. As time moved forward on the coast, in the Norte Chico region specifically, that pattern spread to other places, and the cities that were present grew in size.

- Many sites from the final preceramic period between 3200 B.C. and 1800 B.C. show similarities in architecture and social practices but important differences in diet. The highland sites of Kotosh and La Galgada mainly relied on hunting, but there is also evidence of food products from the Amazon and the coast, suggesting that the residents of these highland sites were traders.
 - At Kotosh, probably as many as 3,000 people lived around a center dominated by two large, terraced platforms. The Temple of the Crossed Hands at Kotosh may show the first evidence of religious iconography.
 - Despite the large central architecture at Kotosh, there are no elite burials found and no defensive architecture.
- Very early sites along the coast continued to grow until their populations reached about 5,000 people per city. Mass production of maritime goods is evident, further suggesting the existence of trade networks.
 - At Aspero, two large structures, one called the Huaca de los Sacrificios and the other one called the Huaca de los Idolos, both date to somewhere around 2800 B.C. (A huaca is basically an ancestral shrine.) These are major pyramid-like structures, topped by rooms and complexes of buildings. The Huaca de los Idolos stood about 10 meters tall and was made of stone,



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The fact that there seems to have been very little llama or alpaca in the diets of highland people suggests that these animals may have been domesticated in the preceramic period.

mortar, and smoothed-clay exteriors. There was no habitation evidence inside, and there were no elite burials found.

- El Paraíso is a later preceramic site along the coast. It started about 2000 B.C. and was the largest of all the coastal cities, covering an area of 58 hectares. Here, two massive buildings faced each other across a wide plaza. The orientation of these buildings suggests that the inhabitants of the city may have had some knowledge of astronomy.
- Eventually, a shift away from the coast and into the inland valleys occurred. It seems that as the preceramic period came to an end, there was an increased reliance on crops. More people moved away from that coast and into the inland cities. As the populations dropped on the coast, they increased in the valleys.

Development of the Inland Culture

- Of all the inland cities, Caral was the largest. In 2004, archaeologist Ruth Shady Solis announced that Caral could be reliably dated to 3200 B.C., making it the oldest city in the Americas—not just South America but the entire Americas.
- There is no evidence of warfare or aggression in the inland culture. There are no fortifications. This suggests that the cities had developed a peaceful, cooperative relationship with one another. They were not competing for resources but, rather, sharing them.
- There is also no early evidence of art or religion in any of these cities. There is nothing to give us information about cosmology or what people thought about the sky, though there is one bit of evidence that perhaps they thought about astronomy. In general, however, we have very little understanding of what, if any, religion the people of the preceramic era practiced.
- A number of telling artifacts in Caral suggest that things were changing by the end of the preceramic period, right before 1800 B.C. For example, there is a cache of flutes carved with little faces.

These personified flutes were obviously used for some sort of music, perhaps in a ritual setting.

- A depiction of a monkey has also been found. This is interesting because these cultures were on the northern coast, where there were no monkeys. The closest monkey was a 12-day walk away in the Amazon. This suggests that the inland people were in contact not only with the coastal cultures but with the Amazon, as well.
- Most amazingly, archaeologists have found what appears to be a khipu in Caral, sealed and buried under a step. A khipu is a textile recording device that we know mostly from the Inca, but here it is at 3000 B.C. at the site of Caral. We will discuss the khipu more in later lectures, but if this artifact is indeed a khipu, it makes Peru one of the earliest places where a writing system was created.

Evidence of Astronomy

- Located 25 miles inland in the Chillón Valley, Buena Vista is a site that was established late in the preceramic period. It was focused on farming and was one of the sites that shows evidence for the formation of a trade network. In 2006, a new discovery was made there that made Buena Vista important for another reason.
- Buena Vista had two temples that could function as astronomical observatories. One, oriented toward the winter solstice, was called the Temple of the Menacing Disk; the other, oriented toward the summer solstice, was called the Temple of the Fox.
- During the excavation of the Temple of the Menacing Disk, archaeologist Robert Benfer noted that the sculpture known as the Menacing Disk was oddly oriented and appeared to face a location outside of the temple and across the valley.
 - At this location on a far ridge, a platform was discovered. The alignment between the point on the disk and the platform on the ridge is exactly the point where the sun sets during the June solstice.

- That means that on the shortest day of the year (winter solstice in the Southern Hemisphere), a person standing on the disk could see sunset over the platform on the far ridge. Similar alignments at the Temple of the Fox appear to be oriented for the summer solstice.
- Offerings at the Temple of the Fox date to 2200 B.C., making Buena Vista the oldest observatory not just in South America but in the entire Americas.
- There are two possible explanations for these findings. One is that the people in Buena Vista were agriculturalists and had a newfound need to know the change of the seasons for planting and harvesting. The other idea is that these temples represent the first signs of developing religion. We know that later cultures in the Andes worshiped the sun, so perhaps these temples show a religious reverence for the sun.

New Theories about the Amazon

- The appearance of foodstuffs and images that seem to be Amazonian in nature in northern highland settlements, such as Kotosh and Caral, begs the question: Who were these cultures trading with? The short answer is: We really don't know.
- Unfortunately, evidence regarding this trade is exceedingly hard to find, and archaeologists often do not agree about the meaning of what little evidence has been found.
- Recent and exciting discoveries in the Amazon suggest that there was a much larger population there than we originally believed, and that habitation began much earlier than previously known.
- Another still-developing theory about the Amazon is that farming was taking place much earlier than previously thought, especially along the eastern edge of the Andes closest to the coastal cities.

- Archaeologists in the Amazon have been using soil samples and wide views of altered landscapes to try to understand its ancient history. What they have found are huge areas of black, human-enriched soils and habitation mounds built up over the jungle floor. Who were the early north coast cities trading with? Archaeology is trying to figure out that right now.

Suggested Reading

Bolen, “The New World’s Oldest Calendar.”

Burger, *Chavin and the Origins of Andean Civilization*.

Moseley, *The Maritime Foundations of Andean Civilization*.

Quilter, “Architecture and Chronology at El Paraíso, Peru.”

———, “Subsistence Economy of El Paraíso, an Early Peruvian Site.”

Shady, Haas, and Creamer, “Dating Caral, a Preceramic Site in the Supe Valley on the Central Coast of Peru.”

Questions to Consider

1. Could sedentary life begin without intensive agriculture and plant domestication?
2. Why would these early people divide themselves between the coast and inland valleys?
3. How and why would cotton be a more important crop than foodstuffs?

South America's First People

Lecture 3

This lecture explores the earliest evidence of human habitation in South America. The sites at Monte Verde and elsewhere indicate that humans settled in the region at least 14,900 years ago and perhaps even as early as 33,000 B.P. Artifacts collected at these sites portray a human community that had adapted efficiently to its surroundings and had become advanced enough to form small, semipermanent settlements. Cave art from the region shows evidence of the early domestication of animals, and sites along the coast indicate the first known practice of mummification in the world. Material collected from Huaca Prieta, a later settlement, even points to a trade network throughout the Andes and into the Amazon.

Earliest Human Habitation

- Before the first cities on Peru's coast, we have evidence of human occupation history stretching back almost 10,000 years earlier, though much of it remains mysterious and controversial.
- To the amazement of most archaeologists, the oldest evidence of humans in the Americas came not from North America but from Chile.
 - In 1975, a traveler found a bone from a mastodon eroding out of a creek bed at a site now called Monte Verde.
 - Two years later, archaeologist Tom Dillehay investigated the site and found human habitation evidence connected to the mastodon. There were tools, fire pits, and even simple houses. The occupation went on for hundreds of years and began as far back as 14,900 B.P (before present).
- Before Monte Verde was discovered, human migration into the Americas was thought to have been by a land bridge formed across the Bering Strait during the last interglacial period. The theory contended that humans walked to the south as ice began to melt

around 13,000 B.P. Now, an earlier coastal migration by canoe seems more plausible.

- There are many sites all around the Americas that are said to be of great age, although most of them are highly contested. Monte Verde, however, is almost unanimously accepted.
 - There is growing information that there may be sites other than Monte Verde that are older than our traditional understanding. These sites are called pre-Clovis because according to the first migration theory, humans came only after the ice receded at 11,500 B.P., and the earliest evidence of these humans was from a mastodon kill site found near Clovis, New Mexico.
 - However, more and more claims of sites earlier than Clovis were then made. Most were dismissed or debated, but Monte Verde's acceptance has forced a reexamination of those sites. With recent advances in genetic studies, we now have a new set of data to consider, as well.
 - According to recent DNA studies, by at least 30,000 B.P., people entered Beringia and stayed there isolated for more than 15,000 years.



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Human evidence associated with Mylodon skins has been found at the Cave of the Mylodons in Chile.

- Year by year, the list of pre-Clovis sites grows. The ones that date to around 15,000 B.P. are now more readily accepted, but the earlier ones, ranging from 20,000 to 60,000 B.P. are still contested and sometimes dismissed by archaeologists as impossible.

The Monte Verde Site

- Monte Verde was not just a campsite but a semi-sedentary village of 20 to 30 people. There were 12 huts made of wooden posts and mastodon hides, two big hearths, and dozens of small hearths. The site is 36 miles from the ocean, which means that its inhabitants were not primarily fishermen.
- Each tent at Monte Verde was about 20 feet long and had a clay-lined cooking pit inside; these were not, then, new or temporary constructions. Rather, they were large, permanent, and planned. DNA testing of the items that were cooked there confirmed the presence of mastodon meat, as well as 45 different species of edible plants.
- The fact that the inhabitants of Monte Verde knew how to eat 45 different plants indicates that they were highly adapted. They knew their environment and had been there for a long time by the date of the settlement 15,000 years ago.
- The fact that we have found no other settlements that date to the same age as Monte Verde is troublesome because no pattern can be established to lend credence to the dates.
- Monte Verde remains mysterious and controversial. The widely accepted part of the site is called layer 2, and it dates to 14,900 B.P. Monte Verde 1, underneath it, has human habitation evidence, too, also uncovered by Dillehay, with dates closer to 33,000 B.P., although Dillehay himself hesitates to believe those dates.
- Though none of it dates to as early as Monte Verde, evidence of early habitation in South America has been uncovered from one end of the Andes to the other. In Venezuela, there is a site called Taima-taima,

dating from 13,000 B.P. On the other end of the Andes, in Chile, there is a cave called Cueva del Milodón that dates to about 5000 B.C. This is a long range, both chronologically and geographically.

South American Cave Art

- As humans spread out north and south on both sides of the Andes, a typical form of cave art emerged called *quilcas*.
- *Quilcas* are red, white, and black wall paintings, usually depicting hunting scenes—humans with spears hunting camelids, such as llamas, alpacas, and guanacos. These paintings have been dated to as early as 12,000 B.P. and have even been found in the Amazon.
- About 6,000 years ago, there appears to have been a shift in the themes of the cave art from hunting themes to fertility scenes. We suddenly see pregnant camelids and unarmed people associated with them. It is plausible to say from this cave art that 6000 B.P. marks the beginning of the domestication of llamas and the beginning of animal husbandry in South America.

The World's Oldest Mummies

- Among the most amazing finds in archaic South America are the Chinchorro mummies. More than 1,500 mummies have been found in the Atacama Desert, dating back to 5000 B.C. These are by far the world's oldest mummies, many of them 2,000 years older than Egypt's oldest mummies.
- Associated with these bodies were whale bones, fishing tools, llama wool, and *atlatls*, short sticks used in ancient times by hunters to throw a shorter spear. These finds indicate that this was a culture of both fishermen and hunters.
- There are no signs of social hierarchy among the mummies. They were buried with equal goods and in equal places. Unlike many other mummy sites, there are no obvious indications of a chief or other leader buried in a more elaborate manner.

- Tragically, recent studies have shown that these people died primarily of arsenic poisoning from the water they drank.
- It is astonishing that, at such an early time and with no evident previous example, these people were able to invent such a sophisticated and effective method of mummification. This is the first time we see mummification, not just in the Americas, but in the world.
- Ancestor mummies would become the core of religion in South America. The Inca society was deeply preoccupied with ancestral mummies, and it is safe to say that this tradition actually started in 5000 B.C. in the Atacama Desert.

The Huaca Prieta Site

- Huaca Prieta, on the coast in the Chicama Valley, has been known for some time to be old, but recent excavations have suggested it may be much, much older than previously thought.
- Huaca Prieta was first excavated in the 1940s and then again in the 1970s. Ceramics were found on the surface dating to around 900 B.C., but buried preceramic occupation phases were discovered underneath the later phases.
- The site at Huaca Prieta comprises pit houses and a 14-meter-tall mound of dark, organic layers of trash. It may have started as a trash pit and later become a platform mound. The mound dates to about 2500 B.C., but it may be older.
- Artifacts discovered at the site include shell middens, cotton nets, and fishhooks, as well as weaved clothes, belts, and hats. There were also a variety of edible plants, such as gourds, chili peppers, and peanuts. The fact that these plants were all of Amazonian origin, again suggests a connection of this early coastal culture with the Amazon.

New Evidence and Changing Theories

- Originally, Huaca Prieta was said to date to around 2500 B.C., but just a few years ago, a team led by Dillehay found evidence of cotton, peanuts, and squash in the area dating to much earlier—around 4000 BC. Even more surprisingly, Dillehay found evidence of human cultivation of crops in the nearby Zaña Valley, dating to as early as 7200 B.C., long before the cultivation at Caral.
- From the Zaña Valley, Dillehay moved to Huaca Prieta in the Chicama Valley. The most important find of his excavations at Huaca Prieta was corn, discovered both at Huaca Prieta and at an adjacent site called Paredones. Dillehay's team found corncobs, husks, and stalks deep in excavation levels. The dates came back at 4775 to 4500 B.C., much older than the site was originally thought to be.
- This find challenges the notion that major staple crops did not come into the area until the early ceramic period. The earliest corn domestication evidence is from central Mexico in 6700 B.C. We see it about 1,000 years later in Panama as well, and now we can trace its southward migration further.
- The early chili peppers and peanuts also point to a trade network and perhaps migration that went over the Andes and into the Amazon basin.
- The Huaca Prieta mound may also be older than originally thought. Dillehay's findings in 2012 show that mound building began there about 5500 B.C.—considerably earlier than the original 2500 B.C. If Dillehay is right, he may have found the origins of the platform mound at Huaca Prieta. His findings, however, are still considered controversial.
- The location of Huaca Prieta near a much later Moche site may mean that people from the later site retained a memory of Huaca Prieta and, perhaps, shared some sort of history, the fullness of which we may never know.

Suggested Reading

Burger, *Chavin and the Origins of Andean Civilization*.

Dillehay, *The Settlement of the Americas*.

Questions to Consider

1. How and why would a culture invent mummification?
2. If you were looking for South America's first humans, where would you look?
3. How did early archaeologists overlook the true antiquity of some of these earliest sites?

Ceramics, Textiles, and Organized States

Lecture 4

This lecture examines a deep shift that took place in the inland valleys around 1800 B.C., concurrent with the introduction of ceramics to the area. The marine-based area around Norte Chico that we explored in our previous lectures was abandoned, and its population appears to have migrated north and south into the more arable sections of the valleys. This movement may have been prompted by politics but more likely by a devastating El Niño season along the coast. In these new communities, we see evidence of two distinct building styles: u-shaped complexes and circular sunken plazas. Later in this period, we also find evidence of religious imagery and the first evidence of violence and warfare.

The Introduction of Ceramics

- Around 1800 B.C., ceramic production finally began in Peru, simultaneously along the coast and in the highlands. These first ceramics were simple housewares, such as shallow bowls, necklaces, and cooking pots.
- Peru was oddly late in its production of ceramics. Ceramics were already being made for 1,000 years just north in Ecuador and Colombia and probably in the places with which these regions were trading in the Amazon. In fact, ceramics were being made much deeper in the Amazon thousands of years before that.
- Between 1800 and 900 B.C., the people inhabiting the valleys of the north coast radically changed the way they were living. Right at 1800 B.C., just as ceramics were introduced, Caral and all the cities of Norte Chico were abandoned. The population moved to other valleys and started life anew with some important changes.
 - A formalized building type was developed that was shared among cities.

- Inland sites dominated. There are very few coastal sites from this time period.
- As these populations moved away from the coast, crops became the primary food source.
- It is during this time that we see the beginnings of religious art.
- We also see the first depictions of organized violence and warfare.
- Almost all the sites around Norte Chico that we've talked about in earlier lectures were abandoned around 1800 B.C., and no ceramics have been found there.

The Impact of El Niño

- Why were those preceramic sites and coastal cities abandoned? Perhaps it was politics, but perhaps it's our first evidence of the powerful El Niño cycle driving coastal people from their homes.
- El Niño is a weather cycle that brings warm water sweeping across the Pacific and onto the western shores of the Americas. In North America, it can create droughts in some regions and floods in others, sometimes far inland.
- Along the western coast of South America, the cold Humboldt Current comes up from Antarctica, creating dry deserts and an extreme abundance of maritime life. This current is one of the reasons that people at such sites as Aspero were able to live almost completely off of fish.
- El Niño brings warm water down from the north once every decade or so. But every 25 to 40 years in South America, El Niño is more severe and can change the water temperature by as much as 6.6° . This change kills all the phytoplankton, and the fish that feed on it must leave for colder water or die.

- Floods can occur along the coast, as well. During an El Niño, some areas can get more rain in two weeks than in the previous 30 years. If that happened to these early cities, their irrigation canals could have been wiped out in a matter of days.
- Every few hundred years, an even worse El Niño hits the coast, creating unimaginable damage. We know that this happened along the coast of Peru in prehistory multiple times. Both the Moche and the Chimu cultures experienced El Niños that destroyed their cities.
- Did the same thing happen to the early preceramic cities of Norte Chico? The evidence points to yes, but the fieldwork is still in progress.

Architectural Evidence of Migration

- As the population from the abandoned cities moved north and south through the valleys, they settled into inland areas of valleys, where the land was fertile and productive and the rivers ran at great strength. Here, they built new, bigger, and stronger irrigation ditches.
- The cities in the southern valleys began building public architecture in forms that are now called “u-shaped complexes.” The cities in the northern valleys started building sunken circular plazas. Both forms had identifiable precedents in the preceramic cities around Caral. In fact, both forms can be traced back to the Norte Chico area.
- There are good reasons to believe that when populations started in the new valleys at the same time that such cities as Caral and El Paraíso were abandoned in the Norte Chico area, it was indeed the same population that moved from one place to the other, taking their ideas with them.
- The fact that the u-shaped and sunken plaza building types became standard at multiple sites indicates that some sort of state identity was beginning to take hold, something beyond just independent cities trading with one another.

U-Shaped Complexes

- In the valleys to the south, there were more than 20 cities with u-shaped complexes. These complexes encompass basically three buildings set up in a complex arrangement. The central building was a truncated-platform pyramid. This pyramid was the largest building and was flanked by long, lower platform mounts. The three structures together created a u shape.
- All these u-shaped complexes are oriented to the northeast. They range anywhere from 13° to 64° off east, which brings to mind sunrise on the June solstice.
- The earliest u-shaped complex dates to about 2000 B.C. at Huaca La Florida in the Rimac Valley just north of Lima. It is substantially bigger than any of the preceramic constructions.
- Many examples of ceramics have been found at Huaca La Florida. It appears to have been a large community, but as was the case with preceramic cities, there are no signs of elite housing or burials.



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Sadly, the growth and success of Lima also resulted in the destruction of many early cities before archaeologists had a chance to study them.

Garagay

- Another ceramic-period site with a u-shaped complex is Garagay, located right on the limits of Lima. It was not recognized to be one of these early cities until 1959.
- Garagay dates somewhere between 1640 and 900 B.C. It is in a horrible state because it was mined for decades for construction fill. Similar modern destruction occurred in Lima during its 20th-century development.
- Garagay was identified as an early ceramic site through a concentrated mapping project. Even though much of the site was mined as construction fill, the mapping project revealed evidence of a u-shaped complex.
- When archaeologists excavated the main pyramid at Garagay, they found a rare fresco on the main walls of the pyramid showing the face of an odd figure that looked human but had fangs as its mouth. This fanged creature is also found throughout Chavín, and it becomes very important in the development of religion in South America.

Gold at Mina Perdida

- Just north of Lima, in the Lurín Valley, stands an important initial period site called Mina Perdida, or “Lost Mine.” It is about 18 hectares across and has a number of u-shaped buildings. The central pyramid of the largest u-shaped building is 23 meters tall, larger than any of the buildings that had been constructed up until that point. Its dates to between 1800 and 900 B.C.
- Mina Perdida has the coast’s earliest evidence of metallurgy—a thin, pounded-foil sheet of gold and copper. Made before smelting, the sheet was cold-hammered. It could have been made as early as 1400 B.C. but no later than 1000 B.C.
- Since the time that Mina Perdida was found, two earlier sites of metallurgy have been found in South America. The first was

Waywaka in the highlands, a gold-working site where a gold-working kit dating to about 1500 B.C. was found in a grave.

- In 2008, an archaic village was found near Lake Titicaca. Discoveries there included a gold beaded necklace associated with a grave that has been dated to no earlier than 1930 B.C. This is significantly earlier than the work found at Mina Perdida.

Cardal—A City in Transition?

- One more major site of note from the southern valleys is Cardal, not far away from Mina Perdida. Cardal was built very late in this period, perhaps as late as 950 B.C.
- The central area of Cardal is a u-shaped complex surrounding circular sunken plazas.
- The presence of both types of architecture suggests that Cardal represents some type of transition or combination of the two distinct building types in earlier cities. Perhaps the city of Chavín was beginning to influence this area.

The Casma Valley

- Shifting our view to the north, we see a population explosion in the Casma Valley, just one valley north of the Norte Chico area that had been abandoned.
- Massive pyramids were built in the Casma Valley, as well as circular sunken plazas. The sunken plazas clearly come from the Supe Valley. We have a total of 36 examples of similar plazas in the Supe Valley alone; thus, it is certain that this form had precedents in the preceramic Norte Chico area.
- Three major sites in the Casma Valley represent the northern building style: Moxeke, Cerro Sechin, and Sechin Alto. These sites are oriented on cardinal directions rather than to the northeast, representing an essential difference between these cities and those in the south.

- The loom first comes into play here also around 1000 B.C., most likely a backstrap loom. Baskets and nets had been made in the preceramic times but always by hand, so the invention of the loom brings with it the first Andean weave textiles.
- The people of Sechin Alto built the largest, tallest structure South America had ever seen. It was a platform mound like many others, but this one stood 44 meters tall, and at its base, it spanned 250 meters to 300 meters. It dates to 1720 B.C.
- Moxeke's main temple is 33 meters tall and dates to sometime between 1800 and 1400 B.C. The overall site plan clearly shows two housing sectors. This might be our first evidence of the *ayllu*, a political structure that exists in Andean communities even today.

Earliest Evidence of Violence

- Cerro Sechin, dating back to 1500 B.C., was found by Peruvian archaeologist Julio Tello in 1937. The main mound is surrounded by a 4-meter-tall stone wall made of granite, and within it were mounted more than 400 stone sculptures.
- The images show fighting warriors with weapons in their hands, some holding severed heads. Other sections show victorious warriors with heads hanging from their belts. This is our first evidence of institutionalized violence in South America.
- Hard dates have been difficult to get, but archaeologists believe this wall of warriors in Sechin Alto was perhaps installed around 900 B.C.
- Not just Sechin, but virtually all the early ceramic cities were abandoned around 900 B.C. Something major happened, but exactly what is still under investigation.

Suggested Reading

Moseley, *The Inca and Their Ancestors*.

Questions to Consider

1. What could have caused the people of Norte Chico to abandon the region?
2. Why did the people of the north become more warlike than their southern counterparts?
3. Was the advent of ceramics the catalyst for social changes, or was it perhaps only a by-product?

Chavín and the Rise of Religious Authority

Lecture 5

In this lecture, we explore what has been called the “mother culture” of South America—the site at Chavín de Huántar. Chavín was centrally located, with access to resources and extensive trade. The Old Temple and New Temple at Chavín are notable for their fascinating iconography of the Fanged Deity, a religious symbol that soon spread across the Andes and along the coast. The ancient cult of the Fanged Deity, with the oracle at Chavín at its center, appears to share many traits with modern Amazonian religion. Chavín is the earliest South American site where religion appears as the basis for political authority.

Chavín de Huántar: The Mother Culture

- In 1919, just a few years after the discovery of Machu Picchu, Julio Tello discovered Chavín de Huántar high up in the Andes. It was obviously much older than anything found before, and he proclaimed it South America’s “mother culture.”
- Today, we know that Chavín de Huántar is not the oldest city in Peru. With an origin date of no earlier than 1200 B.C., Chavín is younger than many of the cities we’ve already discussed. However, there is still good reason to view it as the “mother culture” of Andean civilization. A model of political authority through religion seems to have started there, and it became the pattern for all cultures that came after.
- Chavín was built high up in the Andes, at 3,150 meters, or just over 10,000 feet, above sea level. It is six days’ walk away from the Amazon basin and six days’ walk from the northern coast, sitting in the path of least resistance through the Andes between the two regions.
- Chavín is also located in a fertile area, with a high annual rainfall and the Mosna River running through the middle of the city. The

access to water allowed for highland farming, and the weather and altitude made it an excellent place for camelid herding.

The Old Temple

- The city was built in two major phases, designated as the Old Temple and the New Temple.
- The Old Temple's time period shows that the residential population was small at the time it was built, probably fewer than 500 people. How was such a beautiful city built by such a seemingly small population?
- The Old Temple has a u-shaped complex, just like the cities of the south-central coast. Inside the u-shaped complex is a circular sunken plaza, just like the cities of the north coast. But the Old Temple also has architectural elements that are not seen on the coast at all.
 - The structures of its u-shaped complex are bilevel in height and connected, unlike the u-shaped complexes seen elsewhere.
 - The structures that comprise other u-shaped complexes are solid. But at Chavín, a group of labyrinths is located inside the bilevel structures.
 - There are also standing stone monuments at Chavín and carved panels along the circular sunken plaza.
 - Around the Old Temple is a large back wall, with a four-story set of fanged tenon heads. These are pieces of stone that sit back into the wall, with only the faces poking out. They are made of beautiful white granite; the closest quarry for that kind of stone is 18 kilometers away.

El Lanzón, the Fanged Deity

- In the central passageway of the u-shaped building stands a beautiful statue called El Lanzón, 4.5 meters tall.

- Some people say that El Lanzón was the oracle of the Old Temple, and modern ethnography supports that. Until this century, locals recognized that spot as an oracle.
- The way that El Lanzón pokes out of the roof and comes down into the earth invokes the idea of an *axis mundi*, or a “world axis.” We see this sort of iconography and symbolism in ancient sites around the world.
- Tello called the image of El Lanzón the principal deity. It has also been called the Feline Deity or the Fanged Deity. In form, it is essentially humanoid, but it has a fanged mouth, rounded eyes, and snakes protruding from its head and its belt. Its hands and feet are clawed, prompting the feline description.
- El Lanzón is at the end of one of the passageways under the temple, but there are a number of other passageways, as well. The others lead into chambers where mass offerings were found, perhaps gifts to the oracle.

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The Fanged Deity is depicted as essentially humanoid but with a fanged mouth and rounded eyes.

Religion in the Old Temple

- On the perimeter of the circular sunken plaza within the u-shaped complex are stone-carved art panels in two registers. The lower register shows a group of prowling jaguars. The upper register shows men who appear to be in the process of transforming into jaguars. These men are the key to understanding the function of this temple.
- The men are becoming the Fanged Deity. Their costumes have snakes at the head and waist, and they are holding San Pedro cacti in their hands. The San Pedro cactus is a source of the hallucinogen mescaline.

- These images suggest a major turning point in South American history—the development of religion in earnest.
 - Modern religion in the Amazon focuses on the role of the shaman, whose hallucinogen-induced trances are considered a link to the spiritual world.
 - In the Amazon, *ayahuasca* is commonly used as the hallucinogen. On the coast, the San Pedro cactus is the hallucinogen of choice.
 - The use of hallucinogens always points to shamanism in the ancient Americas.
- Traditional archaeologists talk about a pantheon of gods in South America, but these gods may also be seen as many spirits or supernaturals under a single creator deity. Julio Tello thought that El Lanzón was Viracocha, the Inca creator deity, and some modern archaeologists agree with him. The images on the art panels of the Old Temple may depict priests who are channeling the power of the Fanged Deity.

The New Temple

- Around 500 B.C., a new wing was built off the Old Temple, known as the New Temple, and much of it is like the Old Temple. There is a bilevel building with passageways beneath, with a flat top and staircases extending to its platforms.
- In front of the New Temple is another sunken plaza, but this time, it is rectangular, not circular. Recall that the sunken circular plaza sites along the coast were abandoned by 900 B.C., so the absence of this structure at the New Temple is not surprising.
- The staircase leading up to the top of the platform has an archway over the bottom steps. This is referred to as the Black and White Portal, and it has become the most recognized symbol of all the art at Chavín.

Religion in the New Temple

- The sunken plaza of the New Temple, like the Old Temple, contains images of the Fanged Deity. The elements of his costume are the same: snakes on his head and on his waist, hands and feet, goggle eyes, and fanged teeth.
- The Raimondi Stone seems to be the main monument of the New Temple. It is a tall, flat stone, depicting, once again, a fanged figure with claws and snakes on its waist, but this time, it is holding a staff in each hand. It is commonly called the Staff God and considered something different than the figure of El Lanzón. It may be the same figure as the Fanged Deity but holding two staffs.
- The Patio Stone, another representation of the Fanged Deity in the New Temple, holds not staffs but marine shells, perhaps indicating a connection to coastal peoples.
- Also in the rectangular court are the same kinds of stone tenon heads that are on the back wall of the Old Temple. The faces are in different states of jaguar transformation.
- Another monument found outside the rectangular court is called the Tello Obelisk. Its main image is a giant cayman, obviously Amazonian because no caymans live at 10,000 feet above sea level. On its lower register are two flying figures that appear to be shamans in the process of transformation.

The Society at Chavín

- In conjunction with the construction of the New Temple, Chavín's population grew to more than 3,000 people. Residences started closing in on the ceremonial center, and they eventually surrounded the temple itself and the Mosna River.
- Obsidian suddenly became the most common stone material at the site. It has even been found in common houses. The closest source of obsidian is 500 kilometers to the south. It would appear that Chavín had a strong and widely stretched trade network at this point.

- As we have seen in other ancient cities, there are no obvious indications of elite housing or burials in Chavín.
- There are also no substantial defensive features; the population there seems to have been unconcerned about attack.
- No historical public art has been found, that is, nothing that seems to celebrate the city itself. The only thing that is celebrated in art is the Fanged Deity.

Chavín as a Religious Center

- Around 500 B.C. and a little after, Chavín's iconography began to travel. The cult of the Feline Deity, as it has been called, expanded into other highland sites and along the coast.
- Scholars suggest that Chavín de Huántar was the epicenter of a cult, and that El Lanzón and, perhaps later, the Raimondi Stone were the oracle spots. It seems that Chavín might have been a pilgrimage destination, and perhaps its ideas diffused outward with all those that visited. Ethnography confirms that El Lanzón was an oracle for the modern people of the last century.
- A site called Pacha Kamaq, just south of Lima, is also known as an oracle site. From Spanish chronicles, we know that a wide network of branch temples developed, centered around the main oracle at Pacha Kamaq. Perhaps this is the same way that the Chavín cult spread.
- Between 200 and 300 B.C., Chavín seems to have lost its importance as a pilgrimage center. The population remained at the site, but they filled in the Old Temple circular plaza and built houses on top of it. The village was almost continually occupied until the 1940s.

Suggested Reading

Burger, *Chavin and the Origins of Andean Civilization*.

Longhena and Alva, *Splendours of the Ancient Andes*.

Miller and Burger, "Our Father the Cayman, Our Dinner the Llama."

Moseley, *The Inca and Their Ancestors*.

Reichel-Dolmatoff, *Amazonian Cosmos*.

Questions to Consider

1. Why did the people of Chavín choose to follow Amazonian religion when they were so far up in the Andes?
2. In the fusion of coastal and Amazonian cultures, did one identity end up outshining the other?
3. Why do we still not have good information about the Amazonian cultures that must have influenced Chavín back in 1200 B.C.?

Cupisnique to Salinar—Elite Rulers and War

Lecture 6

This lecture investigates a deep shift that occurred around 500 B.C. with the birth of the Salinar culture. Around 900 B.C., the influence of Chavín de Huántar appears to have been at its peak. Evidence of its influence has been found in the prolific production of Cupisnique pottery across the valleys. However, as the Old Temple at Chavín was abandoned around 500 B.C., a new settlement pattern emerged, characterized by smaller defensive communities devoid of public and religious architecture. This culture, known as Salinar, shows the first signs of warfare and socioeconomic hierarchy in South America and set the stage for the warlike cultures to follow.

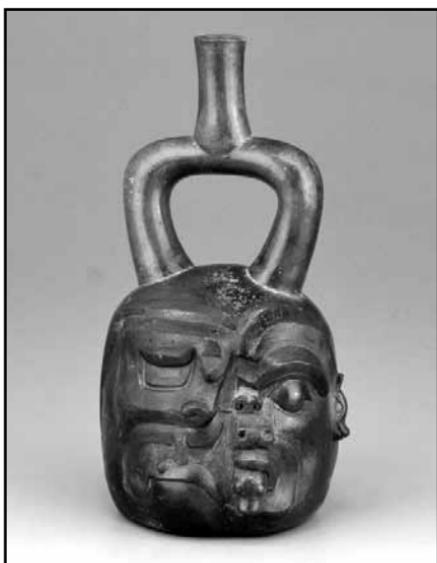
Chavín's Influence on the Coast

- As Chavín de Huántar grew in importance and size, the northern coastal valleys underwent a myriad of changes, with new migrations, new politics, new architecture, and for the first time ever in Peru, clear signs of warfare.
- About 900 B.C., all of the sites with the u-shaped complexes in the south and the circular sunken plazas in the north were abandoned. The u-shaped design was honored at Chavín by about 1200 B.C. The Old Temple's form was clearly inspired by the early coast examples. But then, by 900 B.C., Chavín's increased influence along the coast seems to have led to the demise, or at least the abandonment, of these cities.
- Chavín's influence is clear in the coastal valleys from a long known form of pottery we call Cupisnique. The form of this pottery is a stirrup vessel; it has a bulbous bottom and a spout shaped like a stirrup. Many of these Cupisnique stirrup vessels depict the Fanged Deity or other Amazonian-inspired religious imagery. There are two particularly famous examples of this pottery.

- The first, which we might call the “transformer pot,” shows the split image of a human face transforming into the jaguar-like visage of the Fanged Deity. It is particularly fascinating in that it shows the moment at which a human is transforming into a supernatural being.
- The other example is the “jaguar cactus pot.” It depicts a field of hallucinogenic San Pedro cacti, and peeking from behind them is a jaguar. The image clearly connects those two sacred elements: the hallucinogens of the coast and the transformation of the Amazon.

Caballo Muerto

- Initially, the source of the Cupisnique pottery was a mystery, because most of it had appeared on the market as a result of looting. The mystery was solved in 1972 with the discovery of the Caballo Muerto site.
- Caballo Muerto, which means “dead horse,” started around 2000 B.C., just as the preceramic cities of Norte Chico were being abandoned. Its name most likely comes from a coincidental association noted by the site’s discoverer.
- Caballo Muerto started along the same lines as any other early ceramic city, but late



The distinctive stirrup form of Cupisnique pottery is seen up through Inca times; this stirrup vessel shows the moment of transformation from human to supernatural being.

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in its lifespan, it started producing the kind of Chavín-inspired art that is called Cupisnique.

- The city had the telltale u-shaped complex, but it was in the north, not in the south, where those complexes normally are found. Perhaps this architectural honoring of the south is another indication of Chavín's influence.
- The largest building at Caballo Muerto is called Huaca de los Reyes, and this structure is clearly Chavín-inspired. There were 12 massive images of the Fanged Deity's face on its façade. Keep in mind that the site is an eight days' walk away from the nearest jaguar. For reasons still poorly understood, Amazonian animals were central to the ideas of the people of the north coast.
- Oddly, the diet of those living at Caballo Muerto consisted mostly of fish, despite the fact that it is located far from the coast, and other cities during this time had developed diets based largely on agriculture. Perhaps Caballo Muerto, with its clear similarities to Chavín de Huántar, was along a maritime trade route for the highlands. This would clearly explain why it has so much Chavín imagery as compared to the other early ceramic cities in the coastal valleys.
- The excavations at Caballo Muerto and the nearby site at Purulen indicate that the Chavín-inspired Cupisnique culture originated there, in the upper Moche Valley.
- Whether the Moche Valley sites predate the site at Chavín is still debated by scholars. Whatever the case, these sites were abandoned around 900 B.C., along with the other sites along the coast. After 900 B.C., there is a gap in the archaeology until 500 B.C.

500 B.C.: The Birth of a New Culture

- As Chavín de Huántar ceased to be a pilgrimage site around 500 B.C. and houses were built on what was once ceremonial architecture, things in the northern coastal valleys were also

radically changing. The valleys of the Moche and the nearby Virú Valley started to be repopulated but with such different settlement patterns that archaeologists consider it a new culture altogether: the Salinar culture.

- The people of the Salinar culture lived in small towns built on defensible ridge tops with walls around them. Notably, there were no more pyramids or platform mounds. State-level public architecture does not appear to have been important to this culture.
- The biggest site in the Moche Valley is Cerro Arenas. There are more than 2,000 stone structures densely packed on a defensive hilltop, and they are less than 1 kilometer from the coast—much closer to the water than previous settlements.
 - Mace heads were found in some of these houses, as well as ceramic effigies of mace heads. These finds prove that fighting took place.
 - This site and similar ones show an important social shift. For the first time ever in South America, we can identify elite housing compounds. Some people were clearly wealthier than others in these communities.
- Some say that Salinar sites are South America's first urban centers, with varying socioeconomic levels living together in a single community. We start to see what we think are divisions of labor. As agriculture and food stores stabilized, the local economies turned to artisan endeavors and the development of material wealth. This is what archaeologists mean when they label a community as "urban."
- The Moche Valley was not the only place where this new pattern was emerging. It also took hold in the important Casma Valley just to the south, with fortified cities emerging around 500 B.C.

The Emergence of Violence and Warfare

- One of the sites in the Casma Valley, Las Aldas, appears to have fallen along with the others in the area around 900 B.C. But this

site shows evidence that it fell quite suddenly. An unfinished temple remains, complete with the survey equipment still in place; it appears the workers just dropped their tools and walked away.

- Around 500 B.C., fishermen built on top of the unfinished temple at Las Aldas, constructing a defensive settlement with no regard for the previous ceremonial architecture. Similarly fortified settlements were built throughout the area and in the neighboring Nepeña and Santa valleys.
- In the Santa Valley, we have found not only fortified communities but also citadels whose sole purpose appears to have been defensive. These citadels have double and triple walls with small entries and few, if any, residential structures.
- Perhaps the best example is the fort at Chankillo, located in the Casma Valley. It comprises three sets of walls, built on a hilltop. These appear to be comparable to the European concept of “kill lanes,” areas between walls where an enemy could be trapped and killed from above.
 - Chankillo dates to about 500 to 200 B.C., falling into the same time period as the Salinar culture. It is not identified as a Salinar site, however, because it is outside of the geographical bounds typically associated with Salinar.
 - In 2007, a set of towers at Chankillo was discovered to be part of a sophisticated astronomical calendar. This astronomical complex appears to mirror the destroyed Inca complex at Cuzco, which had been extensively described by Spanish chroniclers. Chankillo, however, predates Cuzco by at least 1,600 years and may point to a longstanding legacy inherited by the Inca.

Hallmarks of the Salinar Culture

- The birth of the Salinar culture around 500 B.C. marks the end of nearly 2,700 years of peaceful cohabitation in South America. It can be seen as the forebearer of an important and particularly warlike culture to follow: the Moche.

- The Salinar culture is marked by four essential elements that appeared all at once.
 - The previous theocracy governing a seemingly egalitarian, cooperative population no longer existed along the north coast.
 - Many small, independent communities emerged with the first evidence of social and economic hierarchy.
 - These communities made defensive structures a priority. This indicates fighting and perhaps full warfare, with communities possibly competing for material goods or defending themselves against an enemy we have not yet identified.
 - This pattern is repeated consistently throughout seemingly independent city-states, indicating a shared cultural identity. This identity expanded over a wider area and into more valleys at once than ever before.
- The fall of old religious paradigms in this culture had immediate implications for power structures. For the first time in the region's history, average people had to be worried that they might get hit in the head with a mace. Without theocratic institutions to turn to, the people sought the protection of powerful leaders, whose wealth apparently increased along with their influence.
- What happened to the old religion? Its fall seems to have been precipitated by the encroachment of population and residential structures over the previously sacred Old Temple at Chavín. This movement dishonored the function and purpose of the Old Temple and likely sent shockwaves through Chavín's sphere of influence.
- When religion was no longer a tool to control the people, it seems that the leaders turned to fear and violence as motivators. This, in turn might have been the trigger point for a new social hierarchy—an hierarchy that would find full expression in the Moche culture to follow.

Suggested Reading

Burger, *Chavín and the Origins of Andean Civilization*.

Longhena and Alva, *Splendours of the Ancient Andes*.

Moseley, *The Inca and Their Ancestors*.

Questions to Consider

1. Why did a seemingly cooperative relationship between sites fall apart when Chavín influence emerged?
2. Why did fighting and distrust befall the post-500 B.C. cities of the northern valleys?
3. Why did the people living there stop building pyramids?

Paracas—Mummies, Shamans, and Severed Heads

Lecture 7

In this lecture, we examine the extraordinary mummies of the Paracas culture in Peru. These mummies were found in 1924 by Julio Tello, and the hundreds of textiles and artifacts with which they were interred give us valuable insight into the Paracas culture. The Paracas people lived in simple pit houses but produced sophisticated textiles portraying the Fanged Deity of the Chavín culture. They also portray headhunting, still in practice in the Amazon today, as well as fascinating images of spiritual transformation. The elongated heads of many of these mummies have given rise to myths about alien ancestry, but science has shown that these deformations were the result of skull manipulation during infancy.

Discovery of the Paracas Mummies

- In 1924, incredibly fine textiles began showing up for sale in local markets in Lima, Peru. Julio Tello inquired about them, and in 1925, he made what many consider his most important discovery: hundreds of mummies in shaft tombs wrapped in these same textiles.
- Tello dated these mummies from 1000 to 200 B.C., and he called the culture associated with them “Paracas.”
- Multiple cemetery locations were found in and around Cerro Colorado, on the Paracas Peninsula, where the desert meets the sea. Hundreds of mummies were interred in mass graves, wrapped in bundles with textiles, ceramics, gold, and jewelry.

The Paracas Culture

- The area where the Paracas culture developed is located where the desert meets the sea and the cold Humbolt Current moves along the coast. The guano from the many sea birds in this area makes a valuable fertilizer; perhaps that is why the Paracas culture chose this as a place of settlement.

- The people of the Paracas culture lived in simple pit houses, a strategy used by many living in hot, arid deserts.
 - A pit house is dug into the desert, with the dwelling part beneath the surface. This allows the dwelling to maintain a comfortable temperature on hot days and cold nights.
 - Though this technique is used around the world, the Paracas people had no precedent for it; they invented it on their own.
- The Paracas culture was widespread, and there are a few urban sites that remain, but most of what we know about this culture comes from the mummy tombs.

Two Phases of the Paracas Tombs

- On the Paracas Peninsula, we find evidence of two phases of tomb building in the Paracas culture, an early one and a late one.
- The earlier phase is called Paracas Cavernas. During this phase, piles of mummies were dropped into shaft tombs. The shafts of these tombs ended in bell-shaped bases in which the mummies were laid. The tombs from this phase are located on top of Cerro Colorado and date from 1000 to 500 B.C.
- The second, later phase is called the Paracas Necropolis. The shafts of these tombs were buried under the pit houses and held only a few mummies, after which the shaft was filled with rocks. The later tombs date from 500 to 200 B.C.

Textiles in the Mummy Bundles

- On the outside, the mummies were wrapped in fairly plain textiles. But inside this outer covering, the bodies were wrapped in layers of more intricate textiles.
- These textiles include things both made specifically for the bundles and preserved from use in practical life, such as shirts, wraps, and mantles.

- The mantles are generally only as wide as a person; the fact that they were made on back-strap looms naturally limited their width. Sometimes, two were stitched together to create a larger mantle.
- Gold, ceramic, and other special items were also often included in the mummy bundles.

The Practice of Mummification in South America

- Mummies are a core part of Andean society throughout its history. The Chinchorro mummies date to 5000 B.C., well before any of the cities that we've discussed in earlier lectures.
- The Wari culture, which we'll discuss in an upcoming lecture, presents the first evidence we have of the veneration of mummies. The people of this culture dedicated rooms in their living structures for the storage and veneration of mummies, including them as participants in their everyday lives. Perhaps the Wari were influenced in their mummy traditions by the nearby Paracas culture.
- The later Inca culture took the veneration of mummies even further. Deceased royalty remained in court and were brought out for public ceremonies. These mummies were considered living and participating members of the community.
- Other world cultures often believe that spirits leave the physical world. But according to Andean beliefs, the spirits of the dead remain with the land and use their mummified bodies as touch points with the physical realm.

Skull Deformation in the Paracas Culture

- Mummies in the Necropolis phase have distinctly elongated skulls that are larger than a normal skull would be. Hundreds of these deformed skulls have been found in the Necropolis tombs.
- Many theories claim that this deformation was the result of skull manipulation on small children. The presence of extra bone in the skulls indicates that the practice of skull manipulation began from

infancy, when the skull was still malleable and producing new growth. It is thought that the skulls of newborns were shaped using boards and then wrapped to maintain the shape and promote the elongated growth.

- The presence of skull deformation has also led to other theories not espoused by archaeology, especially the theory that the Paracas culture was established by aliens.
- Some of these skulls show clear signs of what appears to be brain surgery. Small circular or square holes were cut into the skulls and healed in such a way to indicate that the patient survived the surgery. It is unclear why these surgeries were performed, but they seem to have been successful.
- Some mummies show signs that their heads were removed in context and then replaced. Some of the bundles were found with nothing but heads inside. This puzzling discovery is most likely connected to the Amazonian practice of headhunting, which we'll discuss in more detail in a later lecture.

Chavín Iconography in the Paracas Textiles

- The iconography present on the Paracas mummy textiles gives us insight into the religion of this culture in a way that no other evidence can match.
- These textiles are contemporaneous with the last phases of Chavín de Huántar. The worship of the Fanged Deity continued at the New Temple at Chavín, and we see the same god clearly present in the Paracas textiles. However, new elements in the Paracas textiles indicate a different kind of relationship with the deity.
- There are many themes in the Paracas textiles; some of them are geometric and some have animal designs or bird designs. But the most common design is what scholars call “supernatural” human-like figures.

- If we look at a typical figure in Paracas textiles and compare it to what we see at Chavín, the similarities are obvious. We see the fangs coming off the face, the clawed hands and feet, and the large circular eyes. The most diagnostic elements are the snakes coming off the belt and sometimes the hair. These elements would seem to confirm that the same deity is shown in both cultures.
- The textiles also have similarities to the Tello Obelisk in that they present flying figures. These figures are often flying in groups of 20 or 30—something not seen in the art from Chavín.

New Iconography in the Paracas Textiles

- The new elements of the Paracas textiles are particularly interesting in light of their influence on later cultures. These new elements include the presence of the jaguar headdress, the inclusion of feline whiskers on the faces, the distinct sacred objects held by the figures, and the portrayal of severed heads on the belts and in the hands of the figures.
- The jaguar headdress has extenuated whiskers and an abstracted face and often does not look like a jaguar, but there are a few telling examples, in which the face is replaced by an entire jaguar. The whiskers on these faces also indicate a reference to the jaguar. It is the first time that we see them in South American culture but not the last.
- The objects in the hands of the figures are very distinct. The Paracas culture doesn't show us what these mysterious objects are, but later cultures do: They are Tumi knives, specifically used for decapitation. In Moche, we see these knives as the main tool of what literature calls the Decapitator Deity.



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Some of the figures in the Paracas textiles hold Tumi knives, used for decapitation.

- The tradition of headhunting in ancient South American culture is fundamentally misunderstood. The heads seen in the art and found severed and lying in grave sites are usually called “trophy heads.” Indeed they are, but they are much more than just trophies.
 - These heads were objects of power, used to control the spirits of the dead and the other world and make them do their owners’ bidding.
 - Even today, decapitation takes place in the Amazon. The Jívaro are famous for headhunting. Supposedly, it was made illegal a few decades back, but according to recent reports, the practice persists.
 - The Jívaro believe that when an enemy is killed, its spirit becomes a dangerous malevolent force, called a *muisak*, that will seek revenge if not subdued. The spirit is captured in the head, and that head becomes the servant of that person who killed it.
 - To capture the spirit, the skull is removed and all the holes are sewed up; then, the skull is filled with hot sand, and ropes are fed through it so it can hang from a belt or in a shrine.
 - Skulls in the Paracas period show similar treatment, especially in the stringing of heads from a belt.
- Why are the figures on Paracas textiles so frequently flying? This is the mode of transportation to the other world. Shamans and healers in the Amazon and other places around South America explain that when they journey to the spirit world, they do so by flying.

Theories of Transformation

- The supernatural figures in Paracas textiles seem to be human shamans in the process of transformation.
 - These figures may be transforming into jaguars, similar to Amazonian shamans. The Warao of Venezuela have tobacco shamans whose skin turns yellow and whose pores excrete

nicotine that smell to the local populace like jaguar feces. But in Paracas art, all sorts of animals also transform, not just humans.

- The supernatural figures may be impersonating the Fanged Deity with costumes, but there are no costumes evident in the artifact record.
- Finally, the figures may be channeling the Fanged Deity through rituals. A strong case can be made for this theory, in that the transformation process seems to be complete at the still-humanoid Fanged Deity form, not continuing on into a full jaguar standing on all fours.
- Much about the figures and the transformation process on these textiles remains unclear.

Suggested Reading

Longhena and Alva, *Splendours of the Ancient Andes*.

Moseley, *The Inca and Their Ancestors*.

Pierantoni Campora, ed., *The Paracas Culture*.

Questions to Consider

1. How did clearly Amazonian iconography take such strong hold in Paracas?
2. Why didn't Paracas fall into the same kind of militarized fortress building as that seen from the same period north of Lima on the coast?
3. How did the Paracas people learn to weave such complex patterns and dye fabric so well? Was there a precursor, or is this another “invention”?

The Nazca Lines and Underground Channels

Lecture 8

In this lecture, we turn to the Nazca culture, renowned for the famous geoglyphs carved into the high plains. But the Nazca are notable for much more than the geoglyphs: They were master farmers; produced beautiful polychrome pottery and impressive textiles; and appear to have practiced the skull deformation, headhunting, and Fanged Deity worship of the Paracas culture before them. The geoglyphs, however, are what has captured the imagination of people today, mainly because of the mystery surrounding them. Though theories about alien involvement persist, archaeology has shown that these lines were made relatively recently (400–650 A.D.), that they could easily be made using basic land surveying, and that they most likely served a religious purpose.

The Nazca Culture and Agriculture

- The Nazca were an amazingly ingenious people who transformed the desert into arable farmland and created beautiful painted ceramics. Those achievements are often overshadowed by the massive geoglyphs they created out in the desert, known as the Nazca lines.
- For all intents and purposes, the Nazca are the same culture as the Paracas, evolving their arts and religion and moving deeper into the deserts to farm. As the Paracas areas were abandoned, the Nazca communities emerged.
- The Nazca were the best farmers those valleys have ever seen. There was little seafood in the diet of these people; instead, they ate corn, squash, sweet potatoes, and the Amazonian-originated manioc.
 - Today, we know manioc as the main ingredient of tapioca, but it was originally a semi-poisonous plant.
 - Manioc needs a swampy area in which to grow; the Nazca irrigation systems were strong enough to support this.

- To process the poison out of the manioc, the Nazca hung it from nets so that the poison would drip out as it dried.
- In addition to food products, the Nazca also cultivated cotton, coca, and the hallucinogenic San Pedro cactus.

Sophisticated Irrigation

- The Nazca transformed the desert through a large-scale irrigation system. These systems could not have been constructed without a large organized labor force and expert engineers.
- The Nazca located access points to underground aquifers and excavated underground channels leading out of them into their croplands. Today, those channels are called *puquios*.
- The underground channels were accessed by a series of wells called *ojos*. The wells had spiral-shaped walking paths that allowed access to the *puquios* for maintenance and household supply.
- These wells still have water in them and are still in use by the people of the Nazca and Ica valleys, though the demand of the large population has largely depleted the aquifers.

Nazca Communities

- Nazca communities seem to have been small villages, consisting mainly of pit houses with perishable roofs. They may have also lived in the weaved-grass huts that are found in the area today, but these have not survived in the archaeological record.
- The major archaeological site in the Nazca area is Cahuachi, which has hundreds of mounds and a 70-foot-high main pyramid. Cahuachi was thought for a long time to be the Nazca capital city, but recent excavations have shown a distinct lack of homes there. More than 40 of the mounds are actually just carved hills, not stone structures. What originally looked like hundreds of mounds seems instead to be sculpted landscape.

- Cahuachi is now thought to be another pilgrimage site, specifically for the Nazca people. This is evidenced by the lack of dwellings and the copious amounts of pottery, textiles, food, and shells, which suggest the leaving of offerings.

Art and Artifacts of the Nazca Culture

- The beautiful art and the character of Nazca burials give us an insight into the social organization of these people, the technologies they developed, and their religious beliefs.
- Nazca pottery, known as “polychrome pottery,” is some of the most beautiful ever produced in South America. The forms were very intricate, and the paint is vibrant and beautiful.
 - These beautiful, elaborate pieces are found even in simple houses. Once again, this indicates a certain egalitarian aspect to society; everyone seems to have had access to these fine, beautiful wares.
 - In addition to creating vibrantly colored pottery, the Nazca created shapes and styles not seen elsewhere in South American culture. One example is the double stirrup vessel, reminiscent of the stirrup vessel we saw earlier but with two spouts. They also made effigy vessels with images of various animals and plants.
 - The Nazca were the first to develop a pre-firing painting technique, which gives their pottery a vibrancy and luster not seen elsewhere.
 - The most common subjects in the pottery, as with Paracas art before it, are the priests in the guise of jaguars and the Fanged Deity.
- The Nazca also produced fine textiles, just like their Paracas ancestors. Some of them display an incredibly tight weave, even more so than the Paracas textiles. Though images were weaved into the fabrics, the Nazca also had a technique of painting on the cloth.

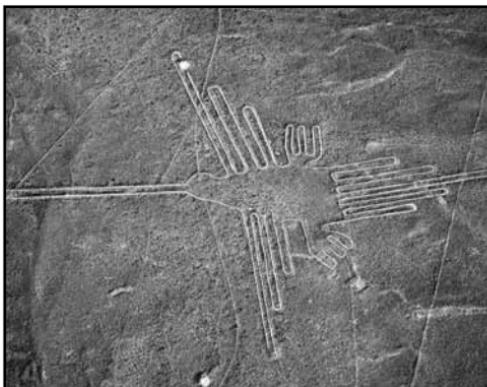
- In addition to images of the Fanged Deity, Nazca art also shows many instances of the severed heads we've seen in other cultures. Actual severed heads have been found in large quantity in Nazca burials.

Nazca Skull Deformation

- The Nazca, like the Paracas, practiced cranial deformation. Many heads have been found with deformation so extreme that one wonders if these people sustained brain damage.
- There is also evidence of cranial trepanation—the sort of brain surgery we saw in the Paracas culture. As was the case with the Paracas, we see indications that the patients survived the surgery and began to heal.
- Though the cranial trepanation could have been performed for medical reasons, it is more likely that it was practiced as a religious ritual—perhaps opening the skull so that harmful spirits could escape.

The Famous Nazca Lines

- The Nazca lines are huge geoglyphs that were carved into the desert in the Nazca area. They are so large and magnificent that people wonder how they could have been made, for what purpose, and why they can be seen only from the sky.
- The Nazca created massive geoglyphs on the high, flat plains between the Nazca and Palpa



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The Nazca lines represent elements also found on pottery, textiles, and other artifacts, such as geometric shapes, animal forms, and human forms.

valleys. Because the plains are out of reach of El Niño floods, many of these lines have been preserved.

- The question of why the lines stand out on the desert floor so clearly from above is fairly simple to answer. There are dark rocks and reddish soil covering the Nazca plains. When those rocks and the topsoil are brushed away, just underneath the surface is lighter, white sand. The topsoil is so thin that it is easily scraped away by foot.
- The forms of these giant Nazca lines vary greatly. There are geometric shapes, spirals, lines (some of which emanate out of a center point), and a variety of animal and human forms. Some of the lines extend for kilometers, all the way across the valley floor.
- The most famous of the forms are those representing animals. We can see a monkey, an orca, and a hummingbird that extends for more than two football fields.
- Some have suggested that there was a master plan to the Nazca lines, but when seen from above, the images are completely disorganized. In some instances, they even overlap or partially erase each other.

Mysteries and Misconceptions of the Nazca Lines

- There is an air of mystery surrounding the Nazca lines, and along with it, many outlandish claims. People commonly say they could not have been made by human hands, that they are probably much older than the Nazca people themselves, and even that they might be ancient landing strips for aliens.
- The age questions are easily addressed. Ground surveys have found many Nazca pottery shards in and around the lines, most of them dating to about 400 to 650 A.D. More tellingly, we also have a set of wooden survey stakes that have been found in and around the lines, also dating to the period 400 to 650 A.D.
- How were the lines made? There have been some interesting and amusing attempts to answer this question.

- An archaeological experiment was done to prove that Nazca textiles could have been used to build a hot air balloon to give the Nazca an aerial perspective. Although the experiment proved that a hot air balloon could be made from the textiles, it went hilariously wrong when strong winds snapped the balloon's cords and sent two hapless investigators floating 100 kilometers off course.
- Most scholars agree that the wooden stakes that were found were used to develop sight lines. Although this shows a good deal of intelligence on the part of the Nazca, it is not particularly special. Two men with stakes and a rope could make a Nazca line.
- Why were the lines made? That is a more difficult question to answer. There are several popular theories.
 - One theory holds that the lines were alien spaceship landing pads. No one has yet excavated a spaceship on the Nazca plains, and it must be noted that the soft sand would make takeoff and landing difficult.
 - According to another theory, the lines are some sort of astronomical calendar. Some sets of lines do indeed align themselves with solar, lunar, and sometimes planetary alignments. But there are hundreds of lines, so those few examples are statistically insignificant when we look at all of the geoglyphs.
 - Yet another theory holds that the lines lead to underground water sources or aquifers. In the 1990s, David Johnson proposed that trapezoidal geoglyphs pointed to subsurface aquifers and informed the Nazca where to dig their wells. Intensive studies in 2000 to 2003 didn't verify this theory; the trapezoids seemed to be statistically random, though a few do point to aquifers.

- Lecture 8: The Nazca Lines and Underground Channels**
- Finally, the lines may have been pilgrimage paths. This theory points to individual groups, over time, making their own kinds of lines and disrespecting earlier lines as having already served their purpose. The pottery shards perhaps indicate offerings, though it is unclear to whom or for what purpose. Lines in the Palpa Valley show the Fanged Deity, which could support this theory.
 - Nazca archaeology indicates that the Nazca people, like the Paracas people before them, were headhunting, manioc-eating jaguar imitators. But they were a walk of at least two weeks away from the Amazon. Those Amazonian origins seem more mysterious than the lines they scratched in the desert.

Suggested Reading

Aveni, *Between the Lines*.

Longhena and Alva, *Splendours of the Ancient Andes*.

Moseley, *The Inca and Their Ancestors*.

Silverman, *Ancient Nazca Settlement and Society*.

_____, ed., *Andean Archaeology*.

Silverman and Proulx, *The Nasca*.

Questions to Consider

1. Why is it that despite the many severed heads found in Nazca burials, warfare is never depicted in the art?
2. How did the Nazca become such experts in hydraulic engineering?
3. Why do you think the Nazca lines were made?

The Moche—Pyramids, Gold, and Warriors

Lecture 9

With the emergence of the Moche culture along the coast, building, farming, religion, art, and war were amplified. The Moche are best known for the incredible corpus of art they left behind, but they were also Peru's most prolific pyramid builders, superior fishermen, expert farmers, and ferocious warriors. Over the next several lectures, we will look at all of those aspects of Moche life, but in this lecture, we'll start with the basics: Who were the Moche and how did they live?

Discovery of the Moche Culture

- Starting in the 1st century A.D., the Moche culture spread across the central and north valleys, from Lambayeque down to modern Lima.
- German archaeologist Max Uhle ran the first excavations in 1899 at Huaca de la Luna and found 21 tombs of elite individuals buried with gold and beautiful ceramics. He coined the term “Moche” for the culture, naming it after the nearby modern town of Moche and the valley surrounding it.
- A wealthy agriculturalist named Rafael Larco Hoyle deserves credit for saving tens of thousands of pieces of Moche ceramics from the black market, building a museum for them in Lima.
 - Larco Hoyle collected more than 30,000 Moche artifacts, mostly pots, from the farms he controlled.
 - The Larco Herrera Museum in Lima is named for his father. Today, it holds the most extensive collection of Moche pottery in the world.
 - The museum has organized the pottery thematically. This system allows archaeologists and others to see in person the characteristics that define these themes, instead of relying on pictorial representations in books.

- Another large collection of Andean pottery has recently been discovered in a very unlikely place: underneath a gas station in Trujillo. This collection was amassed by José Cassinelli, another wealthy agriculturalist.
- These artifacts collected by Larco Hoyle, Cassinelli, and others can be traced back to the pyramids on the north coast of Peru.

The Moche Pyramids

- The coastal valleys are covered with gigantic pyramids made of adobe bricks. They were typically accessed not by stairs but by ramps covered in stucco. Weathering and looting have now eroded them to indistinct piles of sand, so they are not as popular or well-known as pyramids from other cultures.
- The biggest complex is at Moche itself. It is a pyramid pair called the Huaca del Sol (“Shrine of the Sun”) and the Huaca de la Luna (“Shrine of the Moon”). Huaca del Sol was the largest structure in all of ancient South America until the Spanish looted and destroyed it.
- The discovery of the rich tombs in Sipán in 1987 brought attention to the previously dismissed coastal pyramids, and now dozens have been excavated.
- In the process of excavating the Moche pyramids, many wonderful murals have been revealed, painted in brilliant colors on carved stucco. The murals on top of the Huaca de la Luna are typical of these kinds of stuccos. They once again portray the Fanged Deity.
 - Recall that in the time of the Salinar culture, in the same Moche Valley, pyramids and religious art were completely absent. With the Moche culture, they return, bigger and better than ever before.
 - The Fanged Deity in the Moche culture is called Ai-Apaec. The Moche language died off two centuries ago, so no one is really sure now what the name originally meant.

- Some of the Huaca de la Luna murals show warriors and some show naked and bound captives. In addition to the Fanged Deity, upper registers show fantastic spiders with human faces or snakes.

A Unified Collection of City-States?

- The political structure of the Moche is still a question of debate among scholars. Was the Moche culture a unified empire, or did it consist of independent city-states? The city-state model seems to fit the Moche evidence best.
- The u-shaped complexes and sunken circular courts of 2,000 years earlier were independent cities, but they shared certain characteristics. What the Moche sites have that those early sites did not are diverse urban populations surrounding them.
- The site at Huaca del Brujo along the coast has painted murals depicting exactly the same imagery as those at Huaca de la Luna. For that reason, it seems that these two cities, though independent, shared the same kind of cosmology.

Settlement Patterns among the Moche

- Just as people did in the Salinar culture, the Moche people lived in socioeconomically diverse communities, but in this culture, the settlements were arranged in temple groups.
- In Pampa Grande in the Lambayeque Valley, hundreds of residential units were excavated. Within these residential units were apartment compounds. Some of these compounds had more than 100 rooms, with kitchens, living spaces, storage areas, and workshops. Both rich and poor people seem to have lived together in the same compounds.
- Multiple Moche cities had populations of more than 10,000 people. They were supported by wide-scale irrigation systems, more than Peru had ever seen. We see evidence in the cities of the first instance of a staple crop: corn.

- Extensive road systems were built between communities, some running from valley to valley. These roads were dug and filled, curved or raised, and some of them were walled or topped with adobe. Though the Inca are famous for their road system, the Moche culture began formal road construction much earlier. Some of these roads head straight for the Amazon.

Advancements in Art

- The Moche made beautiful ceramics and textiles, though few are well preserved. Works of gold and silver really became their standout medium.
 - The Moche made intricate metalwork using the lost-wax method more famously used in Europe and Asia. It is important to note that the Moche had no contact with Europe or Asia, so they essentially invented the lost-wax method on their own.
 - They also crafted detailed gold and silver artifacts by pounding thin sheets of the metals over hard-carved surfaces. Inlays of precious stone and shells were often added as final touches to the pieces.
- Ceramics were commonly mold made. While the contemporary Nazca were making colorful, pre-fire-painted pieces, the Moche were using fine lines of simple black or red to paint elaborate scenes on thousands of stirrup vessels.
- On these ceramics, we see images of hunting and fishing, elaborate religious rituals, portrayals of pilgrimages, and scenes of warfare. But Moche pottery is most well-known for its sexual imagery.
- The Moche also had a magnificent tradition of ceramic portraiture, so lifelike that it was obviously based on real people, not abstract or idealized faces. Its realism rivaled the Roman stone-carved busts.

Warfare among the Moche

- Before the Moche, we had only hints of warfare in South America: severed heads and the occasional image of a weapon, but nothing

concrete. Not only did the Moche prominently feature war in their art, but with their culture, we can, for the first time, detect it archaeologically.

- Some ceramic pieces suggest that the Moche fielded sizable armies and took captives to be sacrificed. Some pieces show an entire landscape of two armies meeting in the hills.
- It is clear that the Moche had maces, spears, shields, armor, and helmets; these items were found both depicted in the art and as actual artifacts during excavations. There is evidence that weapons were used as architectural decorations, as well.
- Multiple ceramics show details of captives, beheadings, and mutilations. The evidence of these macabre sacrifices was limited to the images from pottery paintings until the 1990s, when Steve Bourget and John Verano found piles of sacrificed victims buried in a plaza next to the Huaca de la Luna—young men with evidence of war wounds and cut throats.
- Who were they fighting? Both sides in these battle scenes are typically dressed essentially the same, leading to the conclusion that the Moche were fighting amongst themselves.

Surrounding Cultures

- There is evidence of cultures near the Moche that archaeology views as distinct people. Three of the major ones are the Virú, the Lima, and the Recuay.
- The Virú culture was located in the Virú Valley, right in the middle of Moche territory. The Virú people seem to have started a little earlier than the Moche, perhaps as early as 200 B.C.
 - Huaca Gallinazo is the main complex identified as Virú. It consists of adobe brick pyramids surrounded by dense urban populations.

- For all practical purposes, the Virú people are Moche. Their artifacts, construction techniques, and way of life are the same as those exhibited by the Moche, although the Virú are, for the moment, still considered a separate culture.
- The Recuay culture is also similar to the Moche but with some key differences.
 - The Recuay settled high up in the Andes, at 11,000 feet above sea level.
 - Like the Virú, they began earlier than the Moche, perhaps around 200 B.C. Some scholars see them as a bridge between the Chavín and the Moche.
 - The city of Recuay itself survived until 650 A.D., which means that these people must have had relations with the Moche along the coast. Perhaps the Recuay were the people the Moche were fighting with.
- The Lima culture was located in the valleys that are now covered by the sprawling modern-day city of Lima.
 - Huacas Pullana and Huallamarca are Lima sites that have become tourist attractions in modern Lima. Huallamarca is a huge pyramid, 100 by 500 meters at its base and 22 meters tall.
 - The Lima people were contemporaneous with Moche but eventually were taken over by the Wari.
 - Pachacamac is another site just south of Lima, known as an oracle site. Archaeology tells us it was built during Moche times, but it is considered part of the Lima culture. The god portrayed at this site bears a distinct resemblance to the Fanged Deity.

The Disappearance of the Moche

- Moche civilization ended abruptly, with the centers being abandoned en masse about 800 A.D. It would be at least 100 years



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The oracle site at Pachacamac was assumed after the Lima times by the Wari as an administrative center, then by the Chimu, and finally, by the Inca.

before the populations of the valleys got organized enough to start building pyramids again.

- The full reasons for the fall of the Moche civilization are still a mystery, but recent ancient climatic studies indicate that a series of El Niños may have been responsible. These weather patterns would have catastrophically affected water and food supplies.

Suggested Reading

Bourget and Jones, *The Art and Archaeology of the Moche*.

Lau, “The Recuay Culture of Peru’s North-Central Highlands.”

Longhena and Alva, *Splendours of the Ancient Andes*.

McClelland, McClelland, and Donnan, *Moche Fineline Painting from San Jose de Moro*.

Moseley, *The Inca and Their Ancestors*.

Silverman, ed., *Andean Archaeology*.

Trombold, *Ancient Road Networks and Settlement Hierarchies in the New World*.

Questions to Consider

1. Why were the Moche so warlike?
2. Was Moche society a unified empire or a collection of independent city-states?
3. Why were ramps used in the temples instead of staircases?

The Moche—Richest Tombs in the New World

Lecture 10

In this lecture, we examine what may be the most important archaeological find in South America: the royal tombs of the Moche. These tombs were discovered by accident and were saved from looting only by the speed and determination of archaeologist Walter Alva and his team. They contained some of the most exquisite artifacts yet discovered—beautiful gold and silver work, intricate beading and molding, and a wealth of images and costume elements portraying the ritual practices of the Moche. One artifact in particular, the Presentation Ceremony pot, has been cited as evidence that the Moche royalty drank the blood of human sacrifices, but this evidence is not conclusive.

Discovery of the Royal Moche Tombs

- We have seen elite royalty depicted in Moche art, but where was the evidence for them? Looted objects were our only hint until 1987, when the first royal Moche tombs were found by accident.
- Our first glimpse of royal Moche tombs came with the discovery of the pyramid complex known as Sipán. The small town of Sipán in the Lambayeque Valley lent its name to the ancient pyramids that tower above it.
- In 1987, a local museum director, Walter Alva, was called to the police station to collect looted artifacts. These works of fine gold and silver were of a caliber that he had never before seen. The informants the police had captured told him that they came from the pyramids themselves.
- The looters had dug deeply into the top of the smallest of the pyramids and uncovered what was clearly a royal tomb. The townspeople found the site and claimed its contents for themselves. Alva led an emergency excavation, under the pressure of time and an angry mob of villagers. Sidney Kirkpatrick's book *Lords of*

Sipan is a great account of the perils faced by the archaeologists as they tried to guard the artifacts.

- Over the next year of excavations, Alva's team found three incredible tombs.

Clues to the Burial Sites

- The key to the discovery of the tombs was noting that they had been dug into the pyramid and then filled with dirt and covered with adobe bricks.
- Once this pattern was understood, archaeologists only had to look for spots that were covered but not filled with bricks in order to find a tomb.
- This marks an important difference between Moche and Egyptian pyramids. Egyptian pyramids were built specifically as royal tombs, whereas the Moche pyramids seem to have been built for some other purpose and then retrofitted as tombs.

Moche Tomb 1

- Tomb 1's chamber was 5 meters square, and it was located 7 meters under the surface. This depth most likely saved the tomb from earlier looting, because it was hard to reach just by digging.



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The incredible tombs at Sipán were the first Moche royal tombs to be found before looters destroyed them and have yielded a steady stream of pottery, jewelry, textiles, and other objects.

- A central wooden coffin sat in the middle of this tomb surrounded by a wealth of objects. There were also bodies of eight other people, as well as two llamas and hundreds of ceramic vessels in the form of small people. The tomb was topped with a wooden beam roof.
 - The bodies buried alongside the central coffin included two young men, perhaps guards; three teenage girls who showed signs of having died previously and been moved; a 10-year-old boy with indications of malnourishment; a footless man in his 20s; and a seated man placed in a “watchman” position above the tomb.
 - The presence of these bodies indicates that the Moche believed that an entourage could follow the dead into the afterlife.
- Though the tomb itself was impressive, it was really the objects found inside the wooden coffin itself that astounded Alva and his team.
 - The man in his 30s who was buried inside the central tomb was covered in multiple layers of ritual costuming, jewelry, and objects of art.
 - The ritual costuming was exactly like that featured in the Moche murals, confirming for the first time that the people and practices portrayed in the art also reflected Moche reality.

Art and Artifacts in Tomb 1

- A banner made of tiny gold plates weaved together with thin wire sat on top. We also see similar banners depicted in Moche pottery.
- There were also necklaces made of tiny beads, thousands of them, fashioned from shell and precious stone in a variety of colors. The cotton string that had held these beads together had long since disintegrated. Team members placed a resin-soaked cloth on top of the beads so that they were able to pick up the necklace intact and reconstruct it in the museum.
- Another necklace was made of half gold and half silver, pounded over detailed molds. Gold and silver in Moche culture indicated

the same kind of duality as between man and woman or, more commonly, between the sun and the moon.

- There were also three sets of beautiful ear flares made of gold inlaid with turquoise and shell. An ear flare is a very large earring in the form of a disc, 2 or 3 inches in diameter, with a large pin on the back for attachment to the ear.
- The warrior ear flares are especially fascinating. All of the component pieces come apart, something like an action figure. The warrior on the flare has a nosepiece similar to the one that was found on the body, as well as decorative belt bells showing the Decapitator Deity.
 - In Moche literature, the Decapitator Deity is often listed as a unique god. He gets his name from the knife he holds in one hand and the severed head in the other.
 - However, the creature also has the fangs, goggle eyes, and claws of the Fanged Deity and may, in fact, be the Fanged Deity.
- Two Tumi knife effigies were also found in the tomb. One effigy was topped with the likeness of the Decapitator Deity, and the other has an ornate headdress topped with pink flamingo feathers.
- Oddly, there were no weapons found with the body—only two ritual objects that appeared to have functioned as scepters.

Art and Artifacts in Tomb 2

- Tomb 2 was similar in form to Tomb 1, with two young women in other coffins, a boy and a dog buried together in a coffin, and an adult male buried above the roof.
- Inside the main coffin was, once again, a man in his 30s layered above and below with costumes and jewelry. The individual was not as richly interred as Tomb 1, but the array was still impressive.

- This tomb contained one set of ear flares made with the lost-wax technique, as well as an intricate gold necklace portraying fanged human faces.
- Set against the back of the body at the waistline was another Tumi effigy, this one half gold and half silver.
 - The placement of the piece and the images of pieces like it in Moche ceramic art lead some scholars to believe that it functioned as a piece of back armor.
 - Leo Welch has pointed out that this back armor would be especially effective at protecting the sacrum of the back from damage by a mace during battle.
- Perhaps the most beautiful piece in Tomb 2 was a gilded copper headdress in the form of an owl. Each of its feathers hung free by thin metal wires and its eyes were made of turquoise and white shell.

Art and Artifacts in Tomb 3

- Tomb 3 was different than the others. It dated about 100 years earlier and lacked the same kind of burial chamber. Its wealth, however, rivaled Tomb 1.
- There was no wood coffin in this tomb. Instead, the body was wrapped in dozens of reed mats. As in Tomb 1, above and below the body were layers of beautiful objects, textiles, and precious metals.
- Tomb 3's most finely made piece lay on top, a necklace of very thin wire disks, each one depicting a spider with a human face on its back.
- Two pieces of gold art were interred with the body, each depicting the Fanged Deity. One is the classic image with the fangs, claws, and protruding eyes. The other has the protruding eyes but no visible fangs. It is called the Crab Deity and some consider it a separate god, but again, it may be another version of the Fanged Deity.

- As in Tomb 1, Tomb 3 contained Decapitator belt bells, which means that this costume element continued for generations. These bells may have been part of a particular ritual costume.
- There was also a scepter with a clear image of a house that had severed heads hanging on the inside. This most likely indicates a Moche custom of displaying severed heads.

The Presentation Ceremony

- In the 1970s, UCLA professor Christopher Donnan named an image on a famous piece of pottery the “Presentation Ceremony,” theorizing that the individuals depicted were priests beheading captives and drinking their blood from the cups in their hands.
- Scholars have determined that the rituals depicted on the pottery were actually practiced on top of the pyramids at Sipán and other locations.
- On the lower register of the Presentation Ceremony pot, we see captives being led by ropes and beheaded with Tumi knives. On the upper register are four smaller figures in the same ceremonial garb as that found in the Moche royal tombs.
 - Donnan has definitively tied, through costume elements and ritual objects, the four characters depicted on the pot to four bodies found in the Moche tombs.
 - The figures appear to be in the process of drinking from ritual chalices. One of them holds the cup aloft and seems to be chanting.
 - Donnan and Alva agreed that the figures on the top register are drinking the blood of the captives on the bottom register. It is now widely accepted that this ritual was indeed practiced by the Moche royalty at the pyramids.
- Sacrifice was indeed a significant part of Moche life, but the Presentation Ceremony pot may be interpreted differently. In

the next lecture, we'll see that the figures depicted may be in a shamanic trance. The purpose of that trance was to make contact with the supernatural world and connect with the Fanged Deity.

Suggested Reading

Alva and Donnan, *Royal Tombs of Sipan*.

Kirkpatrick, *Lords of Sipan*.

Longhena and Alva, *Splendours of the Ancient Andes*.

McClelland, McClelland, and Donnan, *Moche Fineline Painting from San Jose de Moro*.

Moseley, *The Inca and Their Ancestors*.

Silverman, ed., *Andean Archaeology*.

Questions to Consider

1. Who were the other people in the royal tombs of Sipán?
2. Why were the women in Tomb 1 found so long before the tomb's primary person?
3. What can be done to stop the terrible pattern of looting in the Moche area?

The Moche—Drugs, Sex, Music, and Puppies

Lecture 11

This lecture presents an idea that runs contrary to more accepted views of the Moche: that shamanic healing played a central role in Moche culture and that many elements of Moche art have been misinterpreted in the absence of the shamanic perspective. We will first look at the practice of shamanism as it has existed in modern South America up to the present. We find many practices—trances, chanting, pilgrimages, even ritual sex—that also appear in ancient Moche art. This suggests that the widely accepted theory that the Moche royalty drank the blood of their enemies is perhaps wrong. Instead, the art may be seen as depicting shamans engaging in healing or spiritual ceremonies.

Defining Shamanism

- Most published studies of Moche art assert that its primary themes are violence, warfare, sacrifice, and recreational sex. But some scholars disagree with this view, seeing instead shamanism and healing rituals.
- Shamanism is essentially the ability to contact the supernatural world through trance and, in the process, affect our world. Shamanism existed in every pre-Columbian culture of the New World. In fact, it exists everywhere on the planet.
- In South America, six elements are common to all versions of shamanism:
 - All sickness is a supernatural attack from the other world. Evil spirits act on their own or at the request of a shaman to sicken people.
 - Shamans have the power to both heal and harm, and that power comes from the same place. A *brujo*, or a witch, can be either good or evil.

- Healing is a group endeavor. Assistants and family members may participate in healing rituals and ceremonies.
- Hallucinogenic drugs are ingested to allow the shaman to make contact with the other world. The shaman needs to interact with plants that have their own living spirits. The hallucinogens open up their minds, allowing contact with the other world.
- Spirit companions, guides, or guardians are consulted and are, at times, convinced to do a shaman's bidding. In some healing ceremonies, shamans use good spirits to fight off attacking evil spirits.
- The “other world” where shamans contact spirits and the place of the afterlife are the same—the place of spirits. Ancestor spirits reside there, as do the spirits of the natural world.

Shamanism in Modern South America

- A good place to start in the study of Moche shamanism is with the current practice of shamanism in South America, although there is some debate among scholars about whether or not it is appropriate to look at ancient practices in light of current practices.
- Three important ethnographic studies were made in Moche healing practices in the 1900s. Each one describes healers called *curanderos* or *brujos* contacting the other world during what are called “*mesa* ceremonies.” These ceremonies are specifically designed to divine the cause of illness.
- These rituals are called *mesa* ceremonies because they take place at a *mesa de brujo*, “table of the witch.” The table or tablecloth is covered in ritual objects, such as statues, cups, and jars of herbs. The area around the table is lined with knives and swords stuck into the ground.



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A hallucinogenic brew made from the San Pedro cactus is used during the mesa ceremonies.

- All participants in the ceremony imbibe a drink made from the San Pedro cactus, which allows them to interact with the spirit world. In some cases, weapons are used to fight the spirits.
- During the ceremony, the participants sing and chant, in the same way that we've seen on the ancient Moche pottery. Music, both sung and played, is an important characteristic of modern rituals in the Amazonian, Culina, Matsigenka, and Yanamamo cultures as a way of communicating with or calling forth the spirits.
- Many of the headdresses worn by the shamans in the rituals depict a jaguar head at the forehead. This brings to mind the abstracted jaguar heads of the Paracas.
 - The Moche people who wear this particular headdress may be the shaman priests who worship the Fanged Deity, either impersonating the Fanged Deity or becoming the vessel through which he manifests on earth.
 - The Desana of the Amazon in Colombia say that the other world is ruled by a single deity. His name is Viho-mahse, and the jaguar is his representative on earth.

- Characters with jaguar headdresses have appeared in ancient Moche battle depictions. They are weaponless and above them are small floating spirits.

Pilgrimage in Ancient and Modern South America

- Another common element of Andean religion is the tradition of pilgrimage. We saw it in Chavín, in Nazca at Cahuachi, and in Pachacamac, which was an oracle site that was in place for centuries.
- In modern Nazca, the *brujos* climb a sacred mountain, near the town of Puquio, where they pray for water.
- In modern Moche, the *brujos* make a pilgrimage to the community of Las Huaringas near a highland lake on the border of Bolivia and Peru. They go there to seek wisdom from shamans and to collect plants for healing ceremonies.
- Moche pottery has a theme known as “the runners,” in which people are shown running up or down a hill through landscapes of uprooted San Pedro cactus and another plant called misha that has also been identified as a hallucinogenic.
 - These runners are often depicted either in a jaguar headdress or in the process of transforming into jaguars themselves.
 - They may be shamans running uphill or down to make pilgrimages, just as the modern Moche and Nazca people do.

Shamanism and Madness

- One of the common illnesses cured by modern Moche *brujos* is madness, and one of the symptoms of this madness is the tendency to strip naked. Some of the ethnographies of the 20th century showed Moche families bringing their relatives to be cured of madness. These crazed family members are often naked, tied for their own security, and dragged by ropes to the healers for *mesa* ceremonies.
- Ancient Moche art has many scenes of tied, naked people being led to temples, but they are always interpreted as captives being

brought to be killed. In some cases, that may be true, but in other cases, there may be a different interpretation.

- One piece of art shows, on its upper register, a series of roped individuals being led to a temple. Though tied, these people are carried in kitties and surrounded by bird spirits. They appear to be treated much more gently than one would expect for captives.
- The lower register again shows the naked captives, but now, they are being attended by anthropomorphized birds and fed something from a bowl. It's possible that these people are being brought to the temple for exorcism.
- Another pot shows a captive being fed something by a jaguar. Again, it appears that this person is being healed, not condemned.
- In other pieces, there are captives accompanied by warriors with weapons, but even here, the captives are walking in front of the warriors, not being dragged.
- In modern Amazonian tribes, birds are thought of as spirit guides and assistants for the shamans. One wonders whether the birds in the Moche pottery are serving the same purpose.

Violence or Healing?

- The *mesa* ceremonies of the early 20th century were performed at the shaman's house, with the perimeter of the house surrounded by the knives and swords used in the rituals. These ceremonies are now illegal in modern Moche, which has led to the ceremonies becoming mobile and portable—the *mesa de brujo*.
- Moche pottery shows structures much like the shaman's houses, with maces and other weapons lining the structures and perimeters. Inside these houses are people holding cups. It has been argued that these are war houses and the occupants are drinking blood, but they may be healing houses, much like the 20th-century shaman dwellings.

- It is clear that there was plenty of violence in the Moche culture, and it's unlikely that all instances of violence in Moche art have been misinterpreted. The explicit beheadings are obviously related to warfare and not healing, though the Decapitator Deity associated with this practice does seem to be the same as the Fanged Deity worshiped across many of the ancient cultures.
- Even the tradition of severed heads has a connection to shamanism. The stirrup vessels of the Moche bear a resemblance to the strung severed heads that were worn on a belt or hung in a house.

Shamanic Sexual Imagery in Moche Art

- Moche art been called the most overtly sexual imagery in the ancient world, even surpassing the *Kama-sutra*. Most scholars believe that it depicts recreational sex. This may be true, but the sexual imagery may represent another aspect of shamanism that has been overlooked.
- Contact-period accounts on the coast of Peru witness healers having sex with people to cure them. According to modern-day Moche, evil *brujos* will force women to have sex with them, after which the women become their servants.
- Some strange things are depicted in Moche sexual art that indicate that the sex act may be more ritual than recreational.
 - The man is often transforming into a jaguar or wearing a jaguar headdress.
 - The sex is often performed in a house with weapons lining the top. This corresponds to the shaman rituals discussed earlier.
 - There are often people chanting in the vicinity, as well as bird assistants.
 - The types of sex acts performed are often those that would not lead to pregnancy.

- Often, one of the participants is wearing a hat, perhaps to indicate some sort of power identity to the observer.
- One particularly odd theme in this art is the presence of a puppy, either scratching at the door or actively participating in the sex act. The puppy is associated with the Fanged Deity, though it is not clear what its presence designates.

An Alternative View of the Presentation Ceremony

- If one looks at the Presentation Ceremony pot with South American shamanism in mind, the explanation of bloodthirsty warriors is not as logical as it first appears.
- Small figures are floating around the royalty, who are in the process of drinking. These may be the spirits with which modern Moche shamans interact.
- It may also be more logical to assume that the cups hold San Pedro cactus, rather than blood. Although other images on the pot depict decapitations, no evidence of blood-drinking has ever been found in Moche artifacts.
- Some scholars assert that the priests are in a shamanic trance, calling spirits down. They're either dressed as or channeling the Fanged Deity and his bird assistants are helping.
- It may be that the bodies found in the Moche tombs in Sipán were not royalty at all but shamans.

Suggested Reading

Alva and Donnan, *Royal Tombs of Sipan*.

Barnhart, “Shamanism in Moche Art and Iconography.”

———, “Mesas de Brujo of Northern Coastal Peru.”

Caceres Macedo, *Sexuality in the Ancient Moche Society of Peru*.

Gillin, *Moche: A Peruvian Coastal Community*.

Longhena and Alva, *Splendours of the Ancient Andes*.

McClelland, McClelland, and Donnan, *Moche Fineline Painting from San Jose de Moro*.

Moseley, *The Inca and Their Ancestors*.

Sharon, *Wizard of the Four Winds*.

Questions to Consider

1. Are you convinced that the people on the Presentation Ceremony pot were shamans? Why or why not?
2. What does sex have to do with healing and religion?
3. Why is a puppy involved in religious iconography?

Enigmatic Tiwanaku by Lake Titicaca

Lecture 12

This lecture explores a site so impressive that it has spawned theories of supernatural involvement: Tiwanaku in the Lake Titicaca region.

Tiwanaku is notable for its enormous megalithic structures, built and embellished with such precision that modern archaeology still cannot explain them. The area around Lake Titicaca was home to the Yaya-Mama culture, whose central settlement at Pukara shows many similarities with Chavín. The Kalasasaya courtyard at Tiwanaku also appears to share some themes with Chavín, though it is clear that the culture here was unique in many ways. One of its most impressive achievements was raised-field agriculture, which allowed for the development of a large, economically diverse population.

Lake Titicaca and Tiwanaku

- The region of Lake Titicaca and the lands surrounding it, referred to collectively as the *altiplanos*, “high plains,” was where one of South America’s most impressive cultures built its capital, Tiwanaku.
- The Inca referred to Lake Titicaca as their origin place, and an abandoned city on the south end of the lake fits into the Inca pre-origin mythology almost perfectly. Its uniquely sophisticated architecture and huge sculptures have inspired claims of great antiquity, advanced technology, and even theories of alien contact.
- Lake Titicaca itself is an ecological wonder. At 12,500 feet above sea level, it spans the borders of Peru and Bolivia. It is the highest navigable lake in the world. There are a number of islands in the lake, but two of these, the islands of the sun and the moon, play heavily into Inca culture.
- Though the lake was once abundant with native fish, the introduction of trout and overfishing have largely depleted any wild fish. The lake is still home to large numbers of farmed fish.

- Jacques Cousteau dove the lake in 1973 to determine whether he could find submerged Inca ruins. He did not find the ruins, but he did find a previously unknown species of giant frog.
- Perhaps the most famous visitor to the lake in modern times was Thor Heyerdahl, the man who proved that a small boat could sail from South America into Oceania—that early man could have reached the Americas by sea.

The Birth of the Yaya-Mama Culture

- Around 800 B.C., people began to settle in larger communities around the lake. At about 200 B.C., there was a shared pattern in the region—similar architecture, similar ceramics, and a shared practice of erecting stone monoliths.
- The term for this culture became Yaya-Mama (“Father-Mother”), based on some of the monuments that appear to have male and female sides.
- The Yaya-Mama culture developed on the north end of the lake, and a site called Pukara became its largest center. Archaeologists from the region are careful to assert that developments in this area have nothing to do with cultural developments taking place in the north at Chavín at the same time, but there may be connections.
- Archaeologist Sergio Chavez notes four characteristic traits that separate the Yaya-Mama culture from other Andean cultures, but in each case, similarities can be found with Chavín and other cultures.
 - The Yaya-Mama sites have rectangular sunken courts, much like the New Temple at Chavín de Huántar.
 - Stone monoliths stand in the city centers. Although this was certainly unusual around Lake Titicaca, Chavín had its share of standing stones, including the Tello Obelisk.
 - Ritual paraphernalia have been found in these sites, including a statuette of a figure with a severed head and axe, feline images

in pottery, and offering caches of smashed pots and food. There are also dismembered bodies and skulls found in these caches in Pukara. These artifacts are similar to the ritual offerings found at Chavín and Nazca.

- There are unique themes and symbols present in Yaya-Mama iconography. But there are also jaguars, severed heads, snakes emerging from heads and waists, and we find some images with headdresses that have jaguars on them.

The Mystery of Tiwanaku

- Tiwanaku grew from a small village in the B.C. period to a massive urban city, with upwards of 40,000 people in the city itself and as many as half a million people in the valley as a whole. This growth was possible through the development of raised-field agriculture.
- This site is so magnificent that it inspires many questions. More than any other site, people try to connect Tiwanaku to the hands of aliens; the structures are so advanced that people struggle for explanations of how this construction was possible in such an isolated area.
- The site is also consistently thought to be much older than archaeology points to; some people say it is 15,000 years old.
- Tiwanaku is located on the wide, flat floor of the Tiwanaku Valley. The land is mainly grass and clay with hardly any trees. In fact, the Aymara culture that has developed there has a dislike and fear of trees, as opposed to their Amazonian counterparts, who worship trees.
- Tiwanaku is the highest ancient capital in the world. Its location makes it oddly protected from earthquakes, giving it a natural advantage over other settlements in the area.



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Like those at Chavín, the stone walls at Kalasasaya incorporate tenon heads.

The Kalasasaya

- The Kalasasaya, with its sunken court in the middle, is one of the most frequently depicted parts of Tiwanaku. It was the first major construction that we know of at the site.
- Archaeologists believe that it was probably started around 300 A.D., and it was built of hard ashlar blocks that came from at least 20 kilometers away.
- The Kalasasaya itself is 120 meters on one side by 130 meters on another—just barely off square. However, this may have been the result of some horrible reconstruction that occurred before the 1960s.
- Early photos of the site show single standing monoliths leading up to an eastern gate. For unknown reasons, later reconstructionists filled the space between those monoliths with stone walls.
- The overall dimensions of the Kalasasaya remain intact. The orientation, with its astrological alignments, is also intact; its

corners mark the points of the summer and winter solstices, and the middle point marks the equinox.

Connections with Chavín de Huántar

- In the middle of the Kalasasaya is an important monument called the Ponce Monolith. It is the biggest monolith in all of South America, and it shares much of its imagery with the Patio Stone at Chavín.
- The sunken rectangular courtyard also bears a striking resemblance to Chavín. All along the interior walls are the same type of tenon heads that are seen at the courtyard at Chavín. Some archaeologists believe that these heads represent the valley's lineage leaders, but they may represent, as we've seen before, various stages of transformation.
- The Sun Gate is the most compelling Chavín imagery connection at the site. It was moved to stand on one corner of the Kalasasaya, and above the doorway is a standing figure that some say is the sun god.
 - When you look closely at the "rays of sun" emanating from him, however, you can see that they much more closely represent the snakes we've seen previously on the Raimondi Stone at Chavín.
 - The winged figures around him bring to mind the bird imagery at the New Temple and on Moche pottery.
 - The Sun Gate was actually moved to the Kalasasaya from the nearby site of Puma Punku.
- To be clear, Tiwanaku is not a carbon copy of Chavín. Tiwanaku clearly had a unique culture of its own, but the connections to Chavín are worth acknowledgment.

The Site of Puma Punku

- Puma Punku is well known for its large-scale megalithic construction. It has been identified as an elite residential complex.

- The stones in the architecture are not just perfectly fitted, but there is evidence that metal clasps held the stones together, keeping them very tight.
- Within the excavations at Puma Punku, rich ceramics and frequent evidence of feasting have been found. Feasting clearly played an important role in this settlement.
- The Andean Cross symbol is also carved into the stones all around Puma Punku. The Andean Cross has now become a symbol for the Quechua and Inca culture in general, but it actually comes from the Tiwanaku area.
- There are clear signs of economic diversity at Tiwanaku. These elite complexes, such as Puma Punku, are counterbalanced by small, simple houses all around the site.

Raised-Field Agriculture

- Raised fields are essentially parallel deep ditches with raised earthen mounds between them on which crops were sown.
- The mounds absorb heat during the day and emit it at night, mitigating the temperature extremes of the climate.
- The ditches were dug so deeply that the water within them sustained edible fish life. The fish enriched the water and the soil beneath the ditches, allowing the mounds to be replenished with nutrients seasonally.
- It is possible that these people used the same sort of technical knowledge that allowed for raised-field farming to manipulate Lake Titicaca from one enormous lake into two smaller ones connected by a narrow channel, though this has not been proven.

The Akapana Pyramid

- The Akapana Pyramid is the central and largest building at Tiwanaku. It was built late, probably about 500 A.D. It stands 35

meters tall and had seven tiers of terraces, though they have largely been destroyed by looting.

- In 1549, Cieza de León wrote that the top plaza of the Akapana Pyramid had a sunken court that was not rectangular but in the Andean Cross shape.
- The sunken plaza is lined with large stone monoliths, some of them weighing 10 tons. A few of these monoliths are magnetized, but it is unclear whether this was significant in any way.
- Underneath the platform, caches were found containing severed heads.
- When Akapana was built, there was a population boom in and around the city, most likely a result of the development of raised-field agriculture.

Suggested Reading

Janusek, *Identity and Power in the Ancient Andes*.

Longhena and Alva, *Splendours of the Ancient Andes*.

Moseley, *The Inca and Their Ancestors*.

Silverman, ed., *Andean Archaeology*.

Williams, “Rethinking Disaster-Induced Collapse in the Demise of the Andean Highland States.”

Questions to Consider

1. How did Tiwanaku move those massive stones to the city from more than 20 kilometers away?
2. Why raised fields? What did they offer that irrigation systems didn't?
3. Is Tiwanaku associated with Chavín or not?

The Amazon—Civilization Lost in the Jungle

Lecture 13

In this lecture, we learn about the recent and surprising discoveries that point to an Amazonian civilization much larger and much older than previously assumed. Because the Amazonian people built with perishable materials, the great stone artifacts found in other cultures are not found here. Instead, studies in landscape archaeology have revealed an extensive network of earthworks—mounds, causeways, fishing weirs, and even ringed ditches surrounding what were once moated cities. These finds suggest that a thriving civilization of between 10 and 20 million people flourished here, and the dating of pottery at early settlements indicates that this culture may in fact be the cradle of South American civilization.

Surprising New Knowledge

- Right now is an exciting and surprising time in Amazon studies. Things said not to exist are being found and things said to be impossible now seem quite plausible.
- The traditional view of the Amazon has been that it could not support large-scale civilization, only small-scale, seminomadic ways of life. But over the last decades, overwhelming evidence has surfaced proving the existence of mass ancient populations.
- Spanish contact chronicles told tales of dense populations, white shining cities, fortified towns, and extensive roads. These tales were once thought to be lies but are now being confirmed by archaeology.
- Flyovers by petroleum engineers first brought to light manmade mounds and causeways in the area. These were later verified by archaeologists.

Landscape Archaeology Discoveries

- The first formal landscape survey was performed by Clark Erickson during the 1990s in the area of the Beni. Instead of trying to investigate the area through standard excavation, he employed landscape archaeology, a technique that enabled him to look at the bigger picture of human impact over the landscape.
- Through landscape archaeology methods, Erickson found raised-field agriculture, zigzagging walls, major and minor mounds connected by major and minor causeways, and a number of canals that boats could travel on.
- Some of the settlements Erickson located were arranged in a radial pattern with large mounds in the middle and causeways radiating out to smaller mounds.
- He also found anthropogenic soil and ring ditches.

Raised-Field Agriculture

- Raised-field agriculture was practiced in the Beni region just as it was practiced at Tiwanaku, though it served as a particular advantage for the people of the Beni.
- The Beni is located in a savannah that is seasonally inundated. The raised mounds prevent the crops from flooding while capturing the water in the ditches.
- The use of this technique by two cultures active at the same time in a relatively close area suggests that there may have been a connection between them.

Zigzag Walls

- Zigzag walls were found near the mounds. In some places, they extend off the mounds 3 or 4 kilometers. They are paralleled by 3-meter-wide channels that feed into small ponds.

- Erickson decided that these were probably fishing weirs, likely designed to trap fish and shellfish. As water began to flow in during the rainy season, the shells and small fish were caught in the nooks of the zigzag and could be easily retrieved.
- It appears as if the entire landscape became a giant fish farm during the rainy season.

Mounds, Causeways, and Canals

- Across the Beni, there are small and large groups of mounds made up of organic material, pieces of pottery, and other trash items. They seem to have been slowly built up over hundreds of years.
- One of these sites is called Ibataté. It has two large mounds connected by raised causeways. One of those mounds is 18 meters tall and shows evidence of wattle-and-daub houses sitting on top of it. In total, 500 to 1,000 inhabitants appear to have lived on those two mounds alone.
- The causeways number in the thousands. Major causeways were more than 7 kilometers long and very straight.



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In the 1990s, archaeologists discovered that hundreds of square miles of the Beni region had been altered by human hands, in some areas as early as 800 A.D.

- Erickson noticed minor causeways leading from the smaller mounds to the larger ones. He theorized that these were probably made by natural patterns of travel between loose social communities, perhaps extended families. Early north coast Peru had the same sort of independent but connected patterns.
- Running along the sides of these causeways were wide, deep canals, large enough for canoe travel and to hold fish. They were probably dug out as the large causeways were made.
- The Jesuits who served as missionaries in the area mentioned that they were irritated that these wonderful canals and causeways were often used by the locals to go to various parties.

Radial Settlements and Ring Ditches

- The Beni site has large mounds called “forest islands.” They are the epicenters of large causeways with smaller mounds connected by smaller causeways in a radial pattern.
- These were probably chiefdoms, with populations radiating out from centers and one community connected to another by longer causeways.
- The counterparts to these mounds are “ring ditches,” which are essentially circular patterns dug into the earth. Seventeenth-century Jesuits reported that these were used as moats, with palisaded towns on the outside and the city protected within.

Anthropogenic Soil

- Some archaeologists, including Betty Meggers of the Smithsonian, do not believe that the Amazonian soil could support the intensive agriculture necessary to sustain large populations.
- Erickson and others have countered by saying that the soil in the Amazon is almost completely anthropogenic, that is, completely altered by humans. Thousands of years of human habitation has enriched the soil.

- In Erickson's opinion, Meggers and others are underestimating human persistence and the abilities of a group of organized people to change the landscape.

Landscape Archaeology in Other Areas

- Hundreds of kilometers to the east of the Beni is the Xingu River basin in Brazil. Ring ditches, also called geoglyphs, have been found there by the thousands, as well as causeways and roads. The Xingu geoglyphs are clearly the same kind of palisaded communities as seen in Bolivia.
- Similar mounds, geoglyphs, causeways, and raised fields have also been found in Guyana, on the northern edge of the Amazon basin. The evidence spreads into Colombia and Venezuela, as well. These sites date anywhere from 200 to 1300 A.D.
- In the jungles around Iquitos in Peru's Amazon, archaeologists have used the same idea of anthropogenic soils to look at the land. Once again, they have found wide areas of black, rich soil and within that soil, many pottery fragments. It is clear that this soil was enriched by humans.

Majaró Island

- On the mouth of the Amazon in Brazil is a series of islands, the largest of which is called Majaró Island. This island has a section of large mounds, some of them 20 meters tall. These were first discovered by Betty Meggers in the 1940s, but she dismissed them as the work of a short-lived community.
- Archaeologists led by Ann Roosevelt returned in the 1980s and found evidence of a long-term community on the island, dating from circa 300 A.D. all the way up to the point of Spanish contact.
- Extensive mounds and elaborate pottery have been found, though there is no evidence of intensive farming. This is most likely because the population lived primarily on fish.

Ancient Origins in the Amazon

- Today, scholars estimate that the population on the other side of the Andes when Pizarro landed was between 10 and 20 million people. This is a much larger population than previously thought, and it turns out to be much older, as well.
- In a place called Caverna da Pedra Pintada in Brazil, Anna Roosevelt found evidence of civilization in the form of buried pottery, dating to circa 6000 B.C. This was much older than other fragments found in the area; in fact, it was older than any other pottery found in the Americas in general. Roosevelt's find was confirmed by pottery finds of the same age in six other caves in the area.
- South America's next-oldest pottery comes from Guyana in the Amazon basin, from about 4000 B.C. The use of pottery seems to slowly spread to the west, to Colombia and Ecuador, reaching the coast about 2500 B.C. Pottery does not appear on even Peru's coast until 1800 B.C. The oldest pottery in North America dates only to about 2000 B.C.
- Below the pottery at Pedra Pintada was a sterile layer of soil, and beneath that layer was a hunter-gatherer layer dating to 9200 B.C. This evidence rocks our understanding of New World migration patterns. It does not correspond to the Clovis point marked as the origin of human migration from north to south.

Difficulties in Amazonian Archaeology

- Why were we unaware of the age and breadth of ancient Amazonian civilization until recently? One reason is that South American archaeology was focused west of the Andes until after the 1950s.
- Additionally, it is both difficult and expensive to launch a project into such places as the Amazon, where there are no big cities to resupply expeditions.

- It takes a rare archaeologist to invest the amount of time necessary to work in isolated wilderness surroundings. Erickson had what it takes, but not all archaeologists do.
- One stumbling block has been the preconceived notion that civilization is characterized by stone architecture. This notion is unfair to many civilizations around the world. It makes no sense that Amazonian civilization would have traveled far out of its way to acquire building materials that would have served no purpose in that environment.

The Amazon as the Cradle of South American Civilization

- For a long time, archaeologists assumed that Andean civilization predicated Amazonian civilization and that the Amazon adapted technologies and cultures from the Andes. It now appears that the opposite may be true—that South American civilization originated in the Amazon and was adapted in the Andes.
- This idea makes sense when we consider other cradles of civilization. Egyptian civilization emerged along the Nile; Mesopotamian civilization emerged along the Tigris and Euphrates, and the great civilizations of India grew up around the Ganges. Nearly all early civilizations emerged at the largest rivers in their respective regions.
- As we learn more about the ancient Amazon, we may find that this civilization is also the origin of the famous Fanged Deity that appears across the continent.

Suggested Reading

Forero, “Scientists Find Evidence Discrediting Theory Amazon Was Virtually Unlivable.”

Longhena and Alva, *Splendours of the Ancient Andes*.

Mann, “Earthmovers of the Amazon.”

Meggers, *Amazonia*.

Newsome, “The Population of the Amazon Basin in 1492.”

Whitehead, “Searching for Paradise?”

Questions to Consider

1. How did archaeology miss the evidence in the Amazon for so long?
2. Learning what you just did about the Amazon, do you think the inhabitants there were influenced by the Andean cultures, or vice versa, or both?
3. Do you think Tiwanaku people got their ideas about raised-field agriculture from the Amazon?

The Wari—Foundations of the Inca Empire?

Lecture 14

In this lecture, we learn about an important precursor to the Inca civilization: the Wari culture of the Ayacucho Valley. The Wari culture most likely developed in 500 A.D. out of the smaller Huarpa culture that inhabited the valley from about 200 B.C. The Wari distinguished themselves through their extensive road systems; their heavy reliance on camelid herding for food, wool, and labor; and their sophisticated method of agricultural terracing. The terraces not only allowed them to adapt the highland for maximum agricultural production but also made them better able to withstand the droughts that weakened nearby cultures. Though the Wari culture eventually declined around 1000 A.D., many of its advances were used as a foundation for the mighty Inca civilization that followed.

Who Were the Wari?

- The Wari started in the central Andes perhaps as early as 500 A.D. and faded away by about 1100 A.D. They were contemporaries of, and interacted with, the Tiwanaku, the Moche, and the Nazca.
- They had a clear capital city in the Ayacucho Valley called Wari (earlier spelled “Huari”).
- The Wari did things differently than their contemporaries. They built walled cities, had stone-paved roads, and most importantly, developed agricultural terraces.
- The Wari most likely developed from the Huarpa culture that inhabited the Ayacucho Valley from as early as 200 B.C. until the appearance of the Wari in 500 A.D.
 - The Huarpa had a small city capital supported by a few satellite villages. They farmed on very simple terraces, perhaps prototypes of the Wari terraces but on a much smaller scale.

- How the Huarpa culture disappeared is still under investigation. It may have simply been transformed into the emergent Wari culture.

The City of Wari

- The capital city of the Wari was very different from the capital city of the Huarpa. It was large, was surrounded by clearly defensible thick walls, and was built on a hilltop location.
- The city was set up in a strict grid pattern, with all streets at right angles. There were sections of wide plaza that were probably ceremonial.
- Individual rooms were discovered, some in multistory buildings, with wear patterns that suggest that they were residences. These residences were surrounded by many workshops, indicating that the city had a diverse population of agricultural workers and artisans.
- The city was very large, with an area of 3 to 4 kilometers and a population of approximately 10,000.
- Multigenerational tombs were found throughout the city and even in residences. Shrines were made within rooms of houses specifically for keeping mummies among the living. This suggests the same type of ancestral mummy worship that would later become the heart of spiritual culture for the Inca.
- Art specimens found in the city indicate that the Wari worshiped the same Fanged Deity that we have seen in other Andean cultures.

Wari Road Systems

- Although the city of Wari is impressive, it is really the achievements of the Wari outside the city that set this culture apart, especially the extensive road system.
- Wide, formally built roads extended from the Ayacucho Valley, sometimes for hundreds of kilometers. These roads led directly to what we understand as Wari outposts.

- The Inca built over many of the Wari roads, making it difficult to distinguish roads that are specifically Wari.
- Given that the Wari did not use the wheel, it is most likely that these roads were used for moving large herds of camelids safely across the terrain.
 - There are four types of Andean camelids: llama, alpaca, vicuña, and huanaco. Llama and alpaca were domesticated and were important sources of food, fiber, and labor. Vicuña and huanaco were never domesticated and were hunted, the vicuña for meat and wool and the huanaco for meat alone.
 - Llama and alpaca herding was clearly important to the Wari. Both the capital and the outposts had gigantic pens for the herds that were attached directly to the city, just outside the walls. These pens had the capacity to contain thousands of animals.

Agricultural Terraces

- The invention by the Wari of extensive agricultural terraces changed the Andean world, allowing the adaptation of the highlands to farming.
- There were terraces all around the settlements, as well as large terrace systems in remote areas far removed from the city. These appear to have been state-run farms, much like the Inca would set up later.
- The terraces were built to act as renewable garden beds. They were filled with drainage materials and topped with organic matter that could be replaced as the nutrients were exhausted.
- The crops planted in these terraces were mainly corn and potatoes. Corn was planted in abundance, but it was really the potato that took hold during Wari time.
 - The potato originated in the Andes and has since become a staple throughout the world.

- Wild potatoes have been found as far back as the Monte Verde site 4,900 years ago. Eventually, they became domesticated and mass-produced, changing the fabric of the Andean diet and way of life.
- The Andean practice of maintaining diversity in the potato species has protected Andean cultures from the type of famine that occurred in Ireland in the 19th century and has made the potato an instrumental resource in fighting hunger in the region.

Wari Expansion

- About 650 A.D., the Wari way of life expanded into far-reaching locations in the Andes. Was this the result of territorial dominance or merely influence?
- Two Wari outposts have been identified as specifically administrative in purpose: Pikillacta in south Cuzco and Viracochapampa far to the north.
 - Both of these cities are nearly carbon copies of the capital city of Wari. There are roads leading to them, though these have been obscured by the Inca road system.
 - Although Pikillacta and Viracochapampa are set up nearly identically to Wari, with residences, plazas, and camelid pens, there is little evidence of domestic activity there.
- We find evidence of Wari expansion and influence in ceramics. The kero jar, a Wari vessel used for drinking beer, was used in Tiwanaku and eventually spread throughout the Andes.
- The famous shrine of Pachacamac, at the southern border of the powerful Moche, was one of many cities absorbed by the Wari. They kept it as an oracle and did little to change its architecture.
- Just as the Wari were expanding, around 700 A.D., the Nazca withered, and the Wari were probably the reason for that. Skull caches found in the city of Wari bear the telltale signs of deformation from the Nazca culture.



© Edwin Barnhart.

Pikillacta is almost a carbon copy of Wari, but there is little evidence of domestic use there.

- At the end of the Lima culture, Lima architecture shows signs of having been influenced, perhaps designed, by the Wari. Gaps between the bricks in Lima platforms served an antiseismic purpose, a measure most likely introduced by the Wari, who lived in an earthquake-prone area.

State or Sphere of Influence?

- The Inca were clearly a state, imposing their way of life on the communities they took over and changing the architecture within those cities. But at the Wari-influenced sites, we do not really see that sort of imposition of culture.
- The administrative outposts of the Wari were new constructions, and the people inhabiting the sites they took over were not made to change their architecture or life ways.
- For this reason, it appears that the expansion of the Wari culture falls into the category of an expansion of a sphere of influence, rather than the conscious effort of a state to impose its will and dominance on others.

Connection between the Wari and the Tiwanaku

- Older archaeology books identify objects at some sites as “Tiwanaku-Wari culture.” Indeed, some of the ceramic styles are similar, and there was overlap in time periods and geography. But the ways of life of these two people were very different.
- This distinction is clear at the border between the Tiwanaku and Wari regions in the Moquegua Valley. Both cultures had settlements in that valley, and these settlements show obvious differences, especially in farming strategies.
 - Tiwanaku villages were set up in the lower parts of the valley. The farmers there created river-fed irrigation systems to provide water for raised-field agriculture, just as they did in the capital.
 - The Wari settled higher up and built terraces in the hillsides. They diverted water from the upper parts of the same river the Tiwanaku people used.
 - This obviously led to a situation of water competition between the two cultures, though there is little evidence that it led to fighting.
- When droughts came in 1000 A.D., the Tiwanaku sites shrank in size and were eventually abandoned. This may have been a symptom of the fall of Tiwanaku itself around 1000 A.D., but it is also a demonstration of the superiority of terrace agriculture.

The Decline of the Wari

- The Wari capital was also in decline around 1000 A.D. The outposts were abandoned earlier, probably around 900 A.D.
- By 1100 A.D., or perhaps before, the capital city of Wari had been abandoned entirely.
- The end of Wari civilization in the highlands ushered in another age of hiatus, much like we saw between the Chavín and Moche

cultures. For a period of around 200 years, the highland culture consisted of small villages and simple farm terracing communities, with no clear overarching leadership or theocratic control.

Wari Influence on the Inca

- There are several characteristics of the Wari culture that most likely were used by the Inca as a foundation for their own culture.
- Roads with *tambos* (rest and storage houses) connecting far-reaching outposts were perfected by the Inca but originated with the Wari.
- The Wari used state-run terrace agriculture in remote areas, administered through the Wari capital. The Inca would use the same technique in their empire.
- The rectilinear, grid-like urban design used by the Wari can also be seen in Inca cities.
- Government-controlled herding was an important element of control exerted by the Inca across their territories. This practice appears to have started with the Wari.
- The Inca were famous for expanding their territory in search of new resources. The Wari expansion likely occurred for this reason, as well. Viracochapampa especially was in one of the breadbasket areas of the Andes and was most likely built to provide access to those resources.
- Perhaps the most important influence of the Wari on the Inca is ancestral mummy veneration and the housing of mummies within living spaces. Mummies were venerated in earlier cultures, but the Wari were the first culture to put them aboveground in the living spaces. This would become an important hallmark of Inca civilization, as well.

Suggested Reading

- Isbell and Schreiber, “Was Huari a State?”
- Jennings and Alvarez, “Architecture, Local Elites, and Imperial Entanglements.”
- Longhena and Alva, *Splendours of the Ancient Andes*.
- McEwan, “Archaeological Investigations at Pikillacta, a Wari Site in Peru.”
- Mitchell, “Irrigation and Community in the Central Peruvian Highlands.”
- Moseley, *The Inca and Their Ancestors*.
- Schreiber, “Conquest and Consolidation.”
- Silverman, ed., *Andean Archaeology*.
- Trombold, *Ancient Road Networks and Settlement Hierarchies in the New World*.
- Valdez, Bettcher, Ochatoma, and Valdez, “Mortuary Preferences and Selected References.”
- Williams, “Rethinking Disaster-Induced Collapse in the Demise of the Andean Highland States.”
- Young-Sanchez, ed., *Tiwanaku*.

Questions to Consider

1. Was Wari a true state? What do you think?
2. Why are terraces superior to raised fields?
3. Why were the Wari cities surrounded by huge walls? Were they defensive or something else?

The Chimu—Empire of the Northern Coast

Lecture 15

This lecture focuses on the first of two civilizations that arrived simultaneously along the northern coast as the Moche culture came to an end: the Kingdom of Chimu. The leaders of this kingdom arrived by boat and set up an empire that persisted for 700 years. The Chimu are famous for their *ciudadelas*, citadels built to house royal families. The capital of Chan Chan had nine of these citadels, as well as an extensive settlement of farmers and fishermen. A unique sunken-field method of agriculture and massive irrigation channels allowed the empire to thrive until an El Niño destroyed the system in 1000 A.D. The Chimu enjoyed a successful resurgence as conquerors until the Inca conquered them in 1470 A.D.

New Kingdoms on the Coast

- Two major culture groups living along the northern coast were conquered by the Inca only decades before the arrival of the Spanish. They were the Kingdom of Chimu and the Sican culture of the Lambayeque Valley.
- These two new culture groups came to dominate Peru's northern coast as the Moche culture faded around 800 A.D. They persisted for almost 700 years, until the Inca finally conquered the Chimu in 1470 A.D.
- According to Spanish chroniclers, both kingdoms began with strangers arriving by totora reed boats from far away with great leaders who were destined to rule. In Lambayeque, the leader was a character named Naymlap. In the Moche Valley, it was Taycanamu.
- For 500 years, the Sican people were independent. But in 1375 A.D., the Chimu overtook them by force.

The Kingdom of Chimor

- The term “Chimu” is actually the title of the king and used as a name for the culture. The culture itself is called Chimor. The capital city of the Chimor Empire was Chan Chan.
- Taycanamu is said to have established Chan Chan as his capital, and his sons were sent out to establish more outposts in the Moche Valley.
- Archaeology finds the first evidence of the Chimu in the Moche Valley not with the new construction at Chan Chan but as a takeover of the late Moche city of Galindo. The Chimu people built their first ciudadela over Galindo around 900 A.D. A ciudadela is an enclosed compound.
- The giant city of Chan Chan was more than 6 square kilometers, with dense settlements. There were probably more than 30,000 people living there at its height. It was one of the largest cities that South America ever saw, and interestingly, it was right on the coastline.

The Architecture of Chan Chan

- Chan Chan had 9 to 11 ciudadelas or citadels. Each one was surrounded by a massive wall complex.
- The walls outside of the ciudadelas are more than 10 meters tall and 3 meters wide at the base. They taper to about 1 meter at the top, probably to make them more structurally sound during an earthquake.
- All of the ciudadelas are oriented to the north and have only one opening, also to the north. However, to establish that astrology played a role in the constructions at Chan Chan, we would have to look at them as a group and do a detailed analysis of their positioning.
- The ciudadelas were most likely the palaces of the 9 to 11 rulers of the Chimu chronicled by the Spanish. The palaces of previous rulers were kept as shrines and as homes for the rulers’ extended families.

Inside the Ciudadelas

- Each ciudadela was almost a city unto itself, with living quarters for hundreds of people. Labyrinths of passageways led from one section to the next. There were workshops, mostly for precious metals, and large, open courtyards where public ceremonies were probably held.
- Inside the compounds was at least one, if not two, large platform mounds. These were characteristically u-shaped structures, as seen in the Moche culture.
- There were storage areas within the mounds and garden plots throughout the compounds. They seemed to be set up to be self-sufficient for long periods of time if necessary.
- The ciudadelas also included sunken wells that allowed access to the high water table along the coast. The wells were wide, circular constructions with walk-in ramps for access, much like Nazca constructions. It is possible that the Chimu arrived by sea from the south, bringing Nazca ideas with them.

Audiencias: Signature Chimu Architecture

- Each ciudadela also contained many small u-shaped structures called *audiencias*. In Chan Chan alone, there are 178 of these audiencias. They are also found in all outposts of the Chimu culture along the coast.
- The audiencias vary in form and size, but generally, they are about 4 by 6 meters wide. Along the interior walls are typically about six niches. Some of audiencias show evidence of wall paintings depicting lords sitting inside u-shaped structures on thrones.
- Chronicles record that Chimu lords held court in these audiencias. A lord would entertain guests there and probably receive tribute, storing it in the small rooms along the sides and back of the audiencias.

- The audiencias have subtle differences in the kind of carved stucco around them, usually an icon that is repeated. Some have birds, some have geometrical shapes, and some have squirrels. One icon is a squirrel holding a pet gecko—an image at odds with the fierce reputation of the Chimu.
- The u-shaped audiencias are reminiscent of the u-shaped religious complexes found on the north coast from 2,000 years earlier.

Burials in Chan Chan

- Each ciudadela had a single large platform mound toward the back, away from the northern entrance. These are assumed to be the burial places for the rulers who lived there. All of them, unfortunately, were looted in antiquity, but enough evidence remained to confirm that they did indeed hold tombs.
- Although they have been looted of all contents, the burial chambers remain. The central tombs were buried deeply in the center of the mound. The top of the mound had several graves arranged in a grid pattern.
- Archaeologists have confirmed that the ciudadelas were used in sequence, each abandoned as its resident ruler died.

Common Life among the Chimu

- Just outside of the tall walls of these ciudadelas stand dense clusters of small compounds. These were places where mostly craftsman, artisans, and traders lived. They were adobe brick structures, housing perhaps 30 to 50 people.
- There were neighborhood cemeteries with rich burial goods. This shows that the people outside of the palaces got the chance to enjoy modest wealth and independence.
- Every compound had workshops, but metallurgy was the most common occupation of the city. Beautiful works were created from



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The icons in the friezes at Chan Chan reveal subtle differences; some are birds or other animals, and some are geometrical shapes.

gold, silver, and tumbaga, which is a gold/copper combination. Both pounded-metal cups and masks have been found.

- Public art in Chan Chan is limited to rather abstract designs on the ciudadela walls. Artisan wares are our best hints at Chimu religion. According to chronicles, the Chimu worshiped the moon, but archaeology does not confirm that.
 - The most common image found in the art is a face with teardrop-shaped eyes. The Sican culture also portrays faces with teardrop eyes.
 - When these faces smile, they have fangs. They could be representations of another version of the Fanged Deity.
- Another ritual object found in Chan Chan is an abundance of spondylus shells. These shells are not normally found in the waters near Chan Chan; they were either imported en masse from the coast of Ecuador or were collected when an El Niño brought the warmer water closer.

Chimu Agriculture

- On the outer edges of the city was a different kind of settlement of simple stick-and-grass houses or, perhaps, wattle and daub. The occupants of these huts were most likely the fishermen and farmers who supplied the artisans of the city with food.
- To the west and north of the city were the agricultural fields. Because they were so close to the coast, the Chimu developed a unique farming technique known as the sunken-field method. In this method, the farmers dug down through the sand to find the fertile soil underneath.
- The sunken locations made the fields easier to water and allowed them to retain water more efficiently. This method of farming is still in use in nearby rural areas.
- To water their sunken fields so close to the sea, the Chimu built longer and bigger irrigation channels than anyone had before.
 - For the first time in the history of the Peru coast, there were inter-valley channels. They were dug from long distances and connected some of the drier valleys with water from neighboring valleys that had more water.
 - In 1100 A.D., a terrible El Niño cycle ripped through the north coast, completely destroying the Chimu and all their irrigation canals. The channels were rebuilt, but they weren't as effective because the course of the Moche River had changed. One attempt to rebuild was thwarted by a fault line.

The Chimu: Conquerors and Conquered

- It seems that these environmental failures and catastrophes were what led the Chimu to become conquerors. By 1200 A.D., they began taking what they needed from other valleys, both from the north and the south.

- Chronicles recount that a Chimu general named Pacatnamu went north, conquering the valley of Jequetepeque and establishing an administrative center for tribute collection.
- The Chimu conquered the Sican lands in 1375 A.D., transforming Chimor into the second largest empire in all of South American history.
- But the Chimu did not hold that title for long. Soon after the conquest of the Sican culture, the Inca began assaults on Chimor and staged a brutal takeover by 1470 A.D.
- According to Spanish chronicles, the last Chimu king, Minchancaman, was brought to Cuzco, the Inca capital, along with his artisans as servants. The Inca also brought the Chimu mummies to Cuzco so that the people who still lived in the valley knew that their heart—their ancestors—had moved.
- Much of the rest of Chimor’s population was exiled to work in camps far at the edges of the empire, never to return to their homes.

Suggested Reading

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Holstein, “Chan-Chan: Capital of the Great Chimu.”

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Longhena and Alva, *Splendours of the Ancient Andes*.

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Silverman, ed. *Andean Archaeology*.

Smith, “The Development and Role of Sunken Field Agriculture on the Peruvian Coast.”

West, “Community Settlement Patterns at Chan Chan, Peru.”

Questions to Consider

1. Did the Chimu indeed “arrive from afar,” or are they the evolution of the Moche?
2. Why do you think the Chimu decided to build Chan Chan on the coast instead of inland?
3. Why were the ciudadelas enclosed by such tall, thick walls?

The Sican—Goldsmiths of the Northern Coast

Lecture 16

This lecture examines the other culture that developed around 800 A.D.: the Sican culture of the Lambayeque Valley. The Lambayeque Valley is a fertile area that has been home to civilizations for more than 4,000 years, including the great Moche culture. In many ways, the Sican appear to have been direct inheritors of the Moche culture; there are striking similarities in architecture and burial practices. The Sican distinguished themselves, however, in their masterful advancements in metallurgy and ceramics. Their work with arsenical copper and precious metal alloys helped to usher in a South American Bronze Age and ensured a wealth of precious metal artifacts that now populate museums around the world.

The Sican in the Lambayeque Valley

- As the Chimu Empire was expanding, to the north, the powerful Sican culture was thriving in the Lambayeque Valley. The Sican were very different from their Chimu neighbors but not from the Moche, who had inhabited the same valley at an earlier time.
- The name “Sican” was given to this culture by archaeologist Izumi Shimada in 1983 during his excavations at the site of Sican. The culture was formerly called Lambayeque by Rafael Larco, and before him, Max Uhle, the German archaeologist, had named the culture “Eten.”
- The Sican culture thrived in the fertile Lambayeque Valley for almost 600 years, from about 800 A.D. to 1375 A.D., when the Chimu arrived and absorbed them into their imperial empire.
- The Lambayeque Valley was the home of the Moche culture from about 1 A.D. to 800 A.D. and was the site of other cultures for 2,000 years before the rise of the Moche.

- Most of the South American gold that fills museums is Sican gold. Unfortunately, most of it comes from looting.

The Birth of the Sican Kingdom

- According to Spanish chronicles, a ruler named Naymlap came to the valley from the sea with a flotilla entourage. His entourage was extensive, with each individual assigned a special task in the service of the king.
- Naymlap came ashore at the Lambayeque Valley and is said to have established a capital named Chot. His 12 grandsons established 12 more cities in the valley.
- The chronicles say that the 12 cities of the Sican people were a loose confederation of equal cities, with none of them serving as a central capital. This distinguishes them from their contemporaries, the Chimú.
- The archaeology seems to support the claims of the chronicles. In the area of the Lambayeque Valley, at least during this time period, there is no clear capital city and no clear evidence of defensive architecture. There seems to have been autonomy among the cities.

Legends of Naymlap

- When Naymlap died, the chronicles say that a large idol made of green stone was placed at Chot. This may have been an image of the leader or a power object that he brought with him.
- According to legend, the last ruler of the Sican, Fempellec, moved the idol. The entire community was immediately punished with 30 days of rain, terrible floods, and famine. The trials did not stop until the idol was restored to its original location.
- Naymlap also is said to have ordered his vassals, upon his death, to tell the population that he sprouted wings and flew away, then to bury his body in a secret location.

- Naymlap's secret grave and green stone idol have represented a sort of Holy Grail for South American archaeology.

Chotuna

- The mysteries of Naymlap prompted Christopher Donnan to begin excavating a site called Chotuna in the hopes that it could be identified as Naymlap's city of Chot.
- Chotuna dates to about 700 A.D., earlier than other Sican sites, making it a good candidate for the civilization's founding city.
- Chotuna was destroyed in 1100 A.D. by the same El Niño that destroyed Chan Chan and the Chimu. Chotuna was rebuilt, unlike other cities, the majority of which were burned. This suggests that it held a place of importance to the culture.

Sican Burials and Sacrifices

- In 2011, a 13th-century grave of an elite woman was found in Chotuna. It was very Moche-like in form. Inside a large tomb chamber, seven people were buried, along with a llama, offerings, and ceramic and gold art.
- It is not particularly notable that the leader buried in this tomb was female; other female leaders were found in Moche times. The tomb is notable, however, because it illustrates the Sican practice of mass sacrifice of young women.
 - Sican temples are full of sacrificial victims, specifically young women. More than 60 of these sacrificed young women have been found in Chotuna. Some of them were teenagers, one of them was pregnant, and many had their heads removed.
 - At the site of Sican, another 300 young women were found, each one placed under a column on top of a tall huaca.
 - These sacrifices do not mean that women had no value in the culture. On the contrary, the sacrifices show that women were

highly valued, given that many cultures offer only their most prized possessions to the gods.

- Though their art does not show it much, these mass sacrifices reveal that the Sican people were every bit as violent as the Chimu or their Moche predecessors.

Batán Grande and the Moche Legacy

- Of all the Sican cities, one called the Batán Grande in the La Leche Valley is by far the largest. In design, it is very much like the giant Moche city of Pampa Grande, located in the same valley.
- Each of these sites has a cluster of platform mounds in the center and was surrounded by dense populations.
- Pampa Grande was intentionally burned in about 800 A.D., and construction at Batán Grande seems to have begun at about the same time. It is possible that Batán Grande was founded by the people of Pampa Grande.
- Batán Grande was 4 square kilometers of civic core and surrounding population. There were dozens of adobe brick pyramids with access ramps, as in the Moche cities. There were thousands of graves across the site, most with rich offerings of gold, silver, fine pottery, and textiles. Sadly, almost all of these were looted.
- One odd element of Batán Grande is that its graves outnumbered its apparent living population. Perhaps it was a pilgrimage site for ritual burial.
- When the 1100 A.D. El Niño partially destroyed it, Batán Grande was stacked with massive amounts of wood and intentionally burned to the ground, just as Pampa Grande had been.

The Sican Site

- The site of Sican is the namesake of the culture and the location of almost two decades of excavations by Izumi Shimada.

- The site was populated only for a short amount of time, from about 900 A.D. until the destructive El Niño in 1100 A.D.
- Though most of its pyramids are small, there are two larger pyramids in Sican: Huaca de Loro and Huaca Rodillona.

Signature emblems on the brickwork of these pyramids suggest that communities were laying the bricks as a labor tax. Evidence of the same practice was found in Moche.

- There were many hearths in the city and evidence of much feasting but not many workshops or residences. This indicates it may have been more of a pilgrimage site than a settlement.



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The Sican used different ratios of gold, silver, and copper to make different classes of objects, such as necklaces and masks.

Unique Characteristics of Sican Art

- Though in many ways the Sican culture resembles the Moche culture, it distinguishes itself in its art, especially in metallurgy and ceramics.
- The Sican mined copper locally and set up entire communities dedicated to metal workshops. They developed a new kind of copper, arsenical copper, by mixing arsenical elements to make the metal stronger, much like the process used to make bronze. In fact, this practice can be seen as the beginning of a kind of South American Bronze Age.
- Great quantities of gold were produced in hearths, heated to high enough temperatures to melt gold. This also allowed for the production of gold, silver, and copper alloys. Different ratios of metal would be used for different ornaments.

- Sican ceramics were also markedly different than Moche ceramics. Moche ceramics were mostly white, with thin red and black painted lines. But the Sican wares were black with a fine polish on the outside, probably from reduction firing in kilns.

Sican Religion

- Spanish chronicles state that the Sican people worshiped the moon. The name “Sican” even means “temple of the moon” in the local language. However, none of the Sican archaeology has unearthed any iconography pointing to moon worship.
- Instead, there are repeated images of what we call the Sican Deity, a figure with a large headdress, ear flares and catlike eyes that narrow at the side.
- Many scholars believe this deity is an image of Naymlap, the culture hero and founder of the Sican people. Others say that it is the Supreme Deity with avian characteristics.
- The presence of the Sican Deity on Tumi knives brings to mind the Decapitator Deity from the Moche culture. In the few instances where the Sican Deity is portrayed with his mouth open, we can see that he has fangs.
- The prevalence of the jaguar headdress and the appearance of groups of this character suggest that it is not Naymlap or a Supreme Deity but, rather, a priesthood imitating the Fanged Deity, much as in the Moche culture.

The Fall of the Sican

- After the devastating year of 1100 A.D., the Sican rebuilt, but curiously, they no longer created any images of the Sican Deity.
- In 1375, the Chimu finally pushed so far north that they overran the Sican people from fortresses in the Jequetepeque Valley to the south.

- Three generations later, the Sican fell, with the Chimu, under the conquest of the Inca. The lower classes were sent far away to work camps, while the artisans were brought to Cuzco to enrich their new masters.

Suggested Reading

Moseley, *The Inca and Their Ancestors*.

Moseley and Cordy-Collins, eds., *In the Northern Dynasties*.

Roach, “Mysterious Mass Sacrifice Found near Ancient Peru Pyramid.”

Shimada, “The Batan Grande–La Leche Archaeological Project.”

Shimada and Griffin, “Precious Metal Objects of the Middle Sican.”

Questions to Consider

1. Are the Sican people just the Moche continued, or are they a distinct culture, arrived from afar?
2. What happens to a culture when its people enter a bronze age, like the one the Sican people heralded in?
3. Who was the Sican Deity?

The Inca Origins—Mythology v. Archaeology

Lecture 17

This lecture examines the mythology of the Inca as it has been passed down through the Spanish chroniclers and a few firsthand sources. Inca-born Guaman Poma de Ayala wrote of the five “world ages” of the Inca worldview, each lasting 1,000 years. Archaeology largely confirms the timeline and characterization of these ages. The Inca creation stories center on the creator deity, Viracocha, and share with other world mythologies an account of a devastating flood and the reemergence of human society. The origin myths of the Inca recount the travels of eight brothers and sisters from a cave called Tambo Toco to the fertile valley of Cuzco. Once again, archaeology confirms that at least some parts of these myths are based on historical reality.

Sources of Inca History

- Archaeology gives us some knowledge of Inca history and mythology, but most of our knowledge comes from chronicles recorded at the contact period and a few decades afterwards.
 - The difficulty is that these chronicles sometimes do not match in their accounts. In part, these sources conflict because of the kind of information sought by chroniclers.
 - Soldiers tended to ask questions about wealth, land, power, and military campaigns; priests asked about religion, family life, and communities; and bureaucrats asked about resources, labor systems, and politics.
- Not all accounts were written by the Spanish. A precious few were written by those with Inca heritage.
 - Garcilaso de la Vega was an Inca prince with a conquistador father. He was raised in the royal court in Cuzco until the age of 18, when he moved to Spain. In his old age, he produced a book about Inca society.

- The Huarochiri Manuscript is by an anonymous Inca author. It was written in the Inca language, Quechua, and translated into Spanish. This text gives us some beautiful information about myths and religion that we get from nowhere else.
- Inca-born Christian convert Guaman Poma de Ayala was a great source for Incan mythology. His chronicle included more than 400 illustrations depicting all manner of Inca histories and life ways, though it is skewed by Christian bias.

Poma's Five World Ages

- Guaman Poma wrote that the Inca saw time as cyclical and that there had already been five world ages, each lasting 1,000 years.
- The first of those ages was called Wari Wiracocharuna, which means Llama Viracocha People. These people used stone tools and had only leaves for clothing. They originally worshiped God but then they turned to the Andean gods.
- The second age was that of the Wari Runa, the Llama People. They wore animal skins, developed farming, and were generally peaceful. They worshiped Viracocha as their creator deity and were apparently wiped out by floods.
- The third age was that of the Purun Runa, the Wild People. These people had some wealth and started developing textiles. They were the first people to populate the Andes on a large scale. With the accumulation of wealth came the beginning of war.
- The fourth age was that of Auca Runa, the Warlike People. At this point, the Andes were divided into four parts and warfare spread everywhere. The population started living in hilltop forts. This period is also when the Inca decimal system of organization began, as well as advances in metallurgy, tools, weapons, and road systems.

- The fifth age was the Age of the Inca. The Inca sent order to society and war ended. They worshiped what Guaman Poma called the “demons of Cuzco.” This age officially ended when the Spanish arrived.
- Guaman Poma’s five ages somewhat mirror what archaeological history tells us about the Andean region.

Viracocha, the Creator Deity

- The Inca legends say that the first world was in primordial darkness and that a creator deity named Viracocha emerged out of Lake Titicaca. His name roughly translates as “sea foam.” Some accounts call him Kon Tiki Viracocha.
- The Inca was not the first Andean culture to suggest that there was a single creator deity.
 - Coastal cultures worshiped a creator deity named Pachacamac, just like the oracle city near Lima.
 - The Moche called the creator deity Ai-Apaec and carved his image all over their temples.
 - The Chavín also had a single deity. We do not know their name for him, but Julio Tello called him the Principal Deity.
- Viracocha created the first humans—a race of giants. These giant humans did something to anger Viracocha, and he called a great flood to destroy them.
- Viracocha then went to the Island of the Sun to call forth or, according to some accounts, create the sun, the moon, and the stars.
- Once the world had light, Viracocha molded a second race of humans from clay or soft rocks. He painted each one of them with different colors and gave them different clothing and languages. He sent them out across the earth to be the nations of the Andes.

Another Flood Myth

- In Cristóbal de Molina's version of the creation story, people were already on the earth when a massive flood covered even the mountains, and only a single couple survived in a mountaintop cave. The couple was washed out into Tiwanaku, where Viracocha commanded them to stay and work.
- Viracocha then formed people out of clay, and from them, he populated the other nations.
- These Inca mythologies share flood stories with other mythologies around the world. It has been theorized that these flood myths are so widespread and similar because each of these civilizations experienced the warm-up after the last ice age, when melting glaciers caused flooding.

Viracocha's Departure

- All of the chronicles say that after the creation of humans, Viracocha departed Lake Titicaca and headed northwest.
- Why northwest? Gary Urton has suggested it is because the Milky Way runs from the southeast to the northwest at dawn during the harvest season in the Andes.
- It is interesting to note that the Urubamba River also runs northwest, from near Lake Titicaca to nearby Cuzco and beyond. It was called, in ancient times, the Wilka Mayu—the Milky Way—by the Inca.

The Origins of the Inca

- The founding family of the Inca dynasty is said to have emerged from a cave just south of Cuzco in a place called Pacaritambo, or “dawn house.”
- The cave had three openings and was called Tambo Toco, or “window house.” It was said to have connected all the way back to Lake Titicaca by a long underground cave.

- The Inca came out of the middle cave, called the Capac Toco, or the “rich window.” Four brothers and four sisters emerged. The brothers’ names were Ayar Manco, Ayar Auca, Ayar Cachi, and Ayar Ukhu. The sisters’ names were Mama Ocllo, Mama Huaco, Mama Cura, and Mama Raua.
- They emerged from these caves with a destiny: to find a fertile valley and establish a new kingdom. They enlisted the local Tambo Indians as their army, promising land and titles in return for their service.

The Journey to Cuzco

- On their journey northwest to find their kingdom, the siblings became irritated with the rudeness of Ayar Cachi. They tricked him into returning to the cave and trapped him with a large boulder.
- As they traveled, they tested the fertility of the soil with a golden staff. They eventually climbed up a mountain called the Huanacauri, and from there, they first saw the Cuzco Valley. Manco threw the staff down into the valley and it sank to the top, marking the valley as their destination.



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When the founding family of the Inca royal dynasty tested the fertility of the soil in the Cuzco Valley, they knew they had reached the kingdom that was destined to be theirs.

- At that point, the youngest brother, Ayar Ukhu, became an eagle and flew to the sun to confirm that Cuzco was their destined kingdom. When he returned, he became a stone on top of the mountain.
- On their journey to Cuzco, Ayar Manco and Mama Ocllo had a son, Sinchi Roca. He was destined to be the second Sapa Inca, or Inca ruler. This is important because it establishes a pattern of royal incest to keep the bloodline pure.
 - The term “Sapa Inca” is used to avoid confusion, because the specific term for “lord,” Inca, is also used to describe the people and the culture.
 - Today, we call the Inca descendants and their language Quechua, a designation that stems from a mistranslation of Kesua Simi (“valley speak”) into Spanish.
- The remaining six siblings arrived at Cuzco. Mama Huaco killed a man with her sling in such an impressive way that it scared off the existing population in Cuzco and allowed the siblings to settle there. As the city was founded, the last brother was also turned into a stone monument.
- Ayar Manco was the last brother left. He became Manco Capac, the dynastic founder of the Inca. Mama Huaco is credited with planting the first corn in the valley. The Tambo became the 10 *ayllu* of Cuzco.
- There are indications in the chronicles that Manco Capac lied about being the son of the sun in order to establish authority and inspire religious worship.

Inca Mythology from an Archaeological View

- Modern Quechua people still identify a cave as Tambo Toco. A set of ruins has been found nearby, including more than 200 finely built houses with many gold and silver offerings underneath them. The complex looked like a royal palace,

perhaps erected to honor the place of Pacaritambo. The site dates to the earliest days of the Inca culture.

- Archaeologists have also studied the Island of the Sun, where Viracocha is said to have called up the celestial bodies, and where the modern Aymara people still celebrate the solstice. Studies have confirmed that the Inca were there, and that there was a structure indicating the setting of the sun on the solstice. Claims that there was a spot where the Inca worshiped the sunrise have not been confirmed.
- Archaeology seems to confirm that the Inca myths were based, at least in part, on historical truth.

Suggested Reading

Bauer and Dearborn, *Astronomy and Empire in the Ancient Andes*.

Cobo (Hamilton, trans.), *History of the Inca Empire*.

——— (Hamilton, trans.), *Inca Religion and Customs*.

De la Vega (Livermore, trans.), *Royal Commentaries of the Incas and the General History of Peru*.

Guaman Poma de Ayala (Hamilton, trans.), *The First New Chronicle and Good Government*.

Longhena and Alva, *Splendours of the Ancient Andes*.

Moseley, *The Inca and Their Ancestors*.

Salomon and Urioste, *The Huarochiri Manuscript*.

Urton, *The History of a Myth*.

———, *Inca Myths*.

Questions to Consider

1. Many cultures have origin stories that seem to loosely fit historical facts. How do you think the Inca compare?
2. Origin myths often contain within them lessons of morality and models to live by. What of these can we take from the Inca origin myth?
3. What do you think of the chronicles suggesting that Manco Capac's association with the sun was an intentional lie?

Cuzco and the Tawantinsuyu Empire

Lecture 18

In this lecture, we explore the incredible structure of the most important city of the Inca Empire, Cuzco. Cuzco served as the center point of Tawantinsuyu, the four parts of the Inca Empire. Cuzco is most famous for its impressive architecture, with massive stone walls built with such precision that, even with no mortar, they have withstood Spanish onslaught and violent earthquakes. The Coricancha, the central temple of the city, was the sacred dwelling place of the royal mummies until the Spanish burned them, along with the thousands of other mummies housed in Cuzco. Despite the efforts of the Spanish, Cuzco remains an emblem of the strength of the Inca culture.

The Four Parts of Tawantinsuyu

- Cuzco was the heart and soul of the Inca Empire. Its opulence and wealth were unparalleled in the ancient Andean world. To understand the function and success of the Inca Empire, one must understand Cuzco.
- The name Cuzco comes from a word that means “navel,” a reference to its role as the center point of Tawantinsuyu, the land of four parts. The four parts of Tawantinsuyu were Collasuyu, Cuntisuyu, Chinchasuyu, and Antisuyu.
 - Collasuyu was to the south of Cuzco and contained the very important Lake Titicaca region, the Atacama Desert, most of modern-day Chile, and part of Argentina.
 - Cuntisuyu was the smallest of the four quarters, located west of Cuzco and stretching down to the coast. It was tiny, but it encompassed the former Wari capital and the Nazca lands.
 - Chinchasuyu was the empire’s hardest region to control. It included the northern coast, rich in precious metals, and the

Chimu Empire. It also included Quito, the last acquisition before the Spanish arrived.

- Antisuyu was essentially the entire Amazonian region. With its boundary running all the way down the eastern slope of the Andes, it was a difficult area to define and to control for the Inca, but it was also very resource-rich.
- After conquest by the Inca, the inhabitants of each town within the boundaries of the four parts were forced to reconstruct their buildings and restructure themselves in a decimal (base-10) system of organization.
- Goods and labor were redistributed across the empire and administered from Cuzco.

The Structure of Cuzco

- Cuzco itself was divided into two parts: upper and lower, or Hanan and Hurin Cuzco. This was a reflection of the *ayllu* system.
 - The *ayllu* system is what anthropology calls a “moiety.” It is two kin-based groups living in separate parts of the same town or region but functioning as a single community.
 - The kin groups were unified by marriage. Upon marriage, a wife would move to her husband’s community but would retain the ownership of the land in her community.
- The ancient city was set up loosely in a grid, like Wari cities and the city of Chan Chan before it. This may indicate a Wari influence on the Inca.
- According to the chronicles and modern-day locals, the city plan is laid out in the form of a puma. Its body was formed by the streets and its teeth were the zigzag walls of the Sacsahuamán fortress on top of the hill. Under the streets that made the puma’s body ran enclosed rivers.

- The city was full of residences, administrative offices, and storehouses called *colca* for storing the tribute that came from all corners of the empire.
- Much of the city was taken up by gigantic palaces, one for each of the Inca rulers. These individual palaces are reminiscent of the ciudadelas of Chan Chan.

Cuzco's Architecture

- Most of the city's walls were made of perfectly fitted stones, using no mortar whatsoever. The stones were fitted together so tightly that it is impossible to put a dime between them.
- Two kinds of walls dominated the city core: imperial and cyclopean.
 - In the imperial style, the bricks were rectangular and of modest size—something that a single man could pick up and move himself. They were pillowied on the outside instead of flat. These bricks were often held together by bronze clasps similar to those used at Tiwanaku.
 - Cyclopean architecture was made of huge stones, weighing many tons. These were oddly shaped, not rectangular, yet they still perfectly fit together. The best example of this in Cuzco is the palace of Inca Roca.
- The commonly accepted theory of how these huge stones were moved is by the use of logs and ropes. A good explanation for how they were fitted so perfectly together is harder to come by.
 - Some archaeologists believe that the stones were pecked into shape with hammer stones, but this theory seems difficult to believe.
 - Some odd elements in modern Inca stories might provide other clues to the shaping of these stones. For example, the people of the area describe birds whose feces act like acid on the stones. Spanish chroniclers tell of a substance that

could soften stone. One Viracocha myth says that the god created humans from soft stones.

- When one looks closely at the stone walls, the stones appear to be fused. It is possible, though not proven, that the stones were softened and fused together.
 - The Incas were familiar with acid through their metallurgy techniques.
 - There is evidence that the Inca interest in the Atacama Desert may have been linked to the acid beds found there.
 - The crystals in andesite may be susceptible to softening with concentrated acid, and limestone is likely able to be softened. Further study may show that this was the method used by the Inca to fit the stones together.

Antiseismic Engineering

- Countless earthquakes have hit the Andes since the Spanish conquest, but not a single Inca construction has fallen in more than 500 years.
- All Inca walls are trapezoidal, meaning that they taper from a wide bottom to a narrower top. This provides additional stability during an earthquake.
- Beneath some larger buildings are beds of smaller stones. This allows the foundation of the building to move slightly without harming the integrity of the walls.
- The Spanish tried to build over the Inca walls in an attempt to eradicate the culture, but their buildings were destroyed by one earthquake, leaving the Inca walls still standing.

The Coricancha

- The Coricancha is the central temple of the city; its name means “golden enclosure.” It was dedicated to the sun and originally

covered in gold plates. Its architecture is perhaps the finest ever built by the Inca.

- The gold that once covered the exterior and interior walls of the palace was removed and melted down by the Spanish.
- The Spanish chronicles spoke of a spectacular garden in front of the Coricancha. They said that this garden was full of gold-covered, life-sized statues of creatures, not just from the Andes but from all over the empire, as well as golden trees with silver leaves.
- On the interior of the Coricancha was a set of temples arranged around the central courtyard. There were individual temples to the sun, the moon, the stars, rainbows, and lightning.
- The most important function of the Coricancha was to house the ancestral mummies of the royal Inca dynasty.

The Destruction of the Mummies

- Ancestral mummies were the heart of religious life. The royal mummies were taken to the main plaza for festivals and even given food and chicha beer during the festivities.
- When the Spanish arrived in Cuzco, they burned all of the thousands of ancestral mummies that were housed there.
 - Cuzco was a pilgrimage site for mummy worship. People would bring their mummies to be interred at Cuzco and would visit them there.
 - Most of these mummies were housed in hillside huacas, and the spirits of these mummies were thought to live in the mountains.
- Many of the huaca shrines were connected to the center of the city by what are now known as ceque lines. There were hundreds of lines that pilgrims would walk from a now-forgotten center point.



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The stones at Sacsahuamán are the largest in the valley, one weighing in at 128 tons.

- The ceque lines were envisioned to lead far out to the extent of the empire. Some archaeologists, such as Tom Zuidema, believe that they were perhaps astronomical orientations. The Spanish tortured the Inca to reveal the locations of these lines and the mummy shrines.

Sacsahuamán

- At the top edge of the valley stand the ruins of Sacsahuamán. It is said to be a fortress, but it was probably more like an event center.
- Sacsahuamán has three tiers of massive zigzagging walls facing along an open plaza. Some of the rocks in the wall weigh more than 100 tons.
- The structure was called a fortress because a famous battle occurred in the plaza there in 1536, when the Inca were trying to retake the city from the Spanish.
- According to Spanish accounts, that the upper plateau above the walls was full of storage rooms holding equipment, possibly

military. The base of a tower still remains, most likely a water tower for the irrigation system.

The Solar Pillars of Cuzco

- Above the city of Cuzco to the northwest were said to be 4 towers used to mark the passing of the Inca lunar months and the solstice. Some say there were as many as 16 towers, but all of the chronicles agree that there were at least 4.
- The chronicles actually say that there were once 3 towers at Sacsahuamán. Because they were important to the Inca ritual cycle, they were destroyed by the Spanish.
- Archaeologists have found 13 towers at Chankillo on the Peruvian north coast. These function in the same way that the chronicles recount, marking the solstice and the equinox. But the Chankillo towers were created 1,600 years earlier than those at Cuzco.
- Once again, we see that the achievements of the Inca may well have begun in the cultures that came before them.

Suggested Reading

Bauer, *Ancient Cuzco*.

Cobo (Hamilton, trans.), *History of the Inca Empire*.

——— (Hamilton, trans.), *Inca Religion and Customs*.

D'Altroy, *The Incas*.

De la Vega (Livermore, trans.), *Royal Commentaries of the Incas and the General History of Peru*.

Guaman Poma de Ayala (Hamilton, trans.), *The First New Chronicle and Good Government*.

Longhena and Alva, *Splendours of the Ancient Andes*.

Moseley, *The Inca and Their Ancestors*.

Questions to Consider

1. How did the Inca move those giant stones, and how did they fit them so perfectly?
2. What elements of Cuzco point toward cultural connections to Tiwanaku or the Wari?
3. Why would the Inca choose the Cuzco Valley as their capital?

The Inca—From Raiders to Empire

Lecture 19

In this lecture, we trace the rise of the Inca Empire under its dynamic—and, perhaps, mythic—early rulers. After the establishment of Cuzco by the 1st Inca (the dynastic founder), the culture continued to strengthen, flourishing in agriculture and architecture. It was not until the 9th Inca, the famous Pachacuti, that the culture transformed into an empire through an inspired system of labor taxation. Pachacuti and his son, Tupac Inca, expanded the empire through conquest in all directions, a tradition carried on by the 11th Inca, Huayna Capac, until his death from smallpox. The bloody civil war that followed Huayna Capac's death was compounded by disease from Europe and made the empire vulnerable at a dangerous time.

Early Rulers of the Inca

- Spanish chroniclers have left us a wealth of information on the Inca dynasties. Unfortunately, they do not all agree. This lecture presents the elements of the dynastic history that can be found in the majority of the accounts, pointing out when important alternative stories exist.
- All the chronicles agree that there were 12 fully legitimate Sapa Incas, or Great Incas. They also agree that it was during the reign of the 8th Inca that empire-building began in earnest.
- The 1st Inca, Manco Capac, established Cuzco, planting his staff deep in the fertile soil. He married his sister, who gave birth to the next ruler of the dynasty, Sinchi Roca.
- Much like the legends of King Arthur, it is hard to separate fact from mythology when it comes to the early Inca kings.

The Building of Cuzco

- Manco Capac is credited not only with establishing Cuzco but with dividing it into two sections: upper and lower. He is also said

to have established the 10 *ayllus* of Cuzco, made up of the loyal Tambo Indians who served as his army as he conquered the valley.

- Sinchi Roca is commonly credited with commanding the people to terrace the valley and to start planting corn and potatoes. Inca Roca, the 6th Inca, is said to have built a cyclopean palace that now serves as a tourist destination.
- Up until the reign of the 8th Inca, Viracocha Inca, chronicles agree that Cuzco was a small city, with a limited area of control and some fearsome enemies. That situation changed with the Inca's son.

The Legend of Inca Yupanqui

- During the reign of Viracocha Inca, the powerful Chanka people, possibly the remnants of the Wari, attacked Cuzco with overwhelming force. Viracocha Inca fled with his heir, Inca Urqon.
- His younger son, Inca Yupanqui, stayed to fight with a small group of warriors. Legend has it that when all seemed lost, the rocks themselves rose up against the Chanka and helped to defeat them.
- When the king and his heir returned, Inca Yupanqui banished them and had Inca Urqon removed from the royal line. Yupanqui took the throne in 1438 with popular support and was proclaimed a hero. He became the 9th Inca.
- He took the name Pachacuti Inca Yupanqui and became the most famous king in Inca history. There are still statues in his honor throughout the Andes.
- Viracocha Inca was eventually allowed to return to the court but in shame. Pachacuti is said to have made him publicly drink chicha beer out of a dirty jar as Pachacuti and his court hurled insults at him.

The Vision of an Empire

- Under Pachacuti, the Inca went from mere raiders to an empire. This was achieved through the implementation of a community-

based labor taxation plan called *m'ita*, which gave Pachacuti a workforce of millions.

- His plan to unify the Andes under this labor system is said to have come to him in a vision, given to him either by the sun or the patron deity Viracocha.
- According to one myth, as Pachacuti was walking out in the lands of Cuzco, he found a crystal tablet in a spring, and that tablet showed Pachacuti a vision of a man in a royal headdress with snakes or lions emerging from it. This crystal tablet was apparently kept in the palace and was able to show Pachacuti the future.
- In one version, Pachacuti determined that the headdressed man was Viracocha, and that he should be placed above the sun in the Coricancha. In the layout of the Coricancha today, we find the Temple of Viracocha in a place of prominence.
- Other chronicles say that the sun gave Pachacuti the vision and that Cuzco became more solarized as a result.
- An interesting golden panel once hung in the Coricancha that depicts the sun and the moon with a shadowy oval above them. This may be Viracocha.
- The symbol of Cuzco is a gruesome face with fangs. If this is Viracocha, he bears a striking resemblance to the Fanged Deity.

Pachacuti as Conqueror

- According to chronicles, Pachacuti's first targets were the kingdoms around Lake Titicaca. He led a large army, many of them Chankas that he had conscripted into service after he had defeated them. He brought the leader of the defeated army back to Cuzco and is said to have beheaded him.
- Next, he turned north to conquer the best agricultural lands. He and his heir, named either Thupa Inca or Tupac Inca, led many of the



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The layout of Coricancha includes a central courtyard with various temples, including the Temple of Viracocha in a place of prominence.

campaigns personally. They conquered the large town of Cajamarca, which was to be a major staging ground for future battles.

- It was also during Pachacuti's reign that the great kingdom of Chimu was defeated and brought into the empire. The last Chimu lord, Minchancaman, was taken prisoner and brought to Cuzco, along with his best artisans.
- By the end of Pachacuti's life, the core of the empire was under Inca control. From there, it fell to his heir, Tupac Inca Yupanqui, to consolidate control of those regions and expand further out to the north and south.

The Inca under Tupac Inca Yupanqui

- To keep his bloodline pure, Tupac started a tradition by marrying his full-blood sister, or perhaps he kept a tradition started by Manco Capac.

- Tupac Inca's main campaigns reached south into Chile, through the Atacama Desert and as far as modern Santiago, almost doubling the size of the empire. Before these conquests, he spent much time and effort hunting the Amazonians deep into the jungle, claiming the eastern slope of the Andes.
- Great efforts were made to capture Quito, perhaps because of its relationship with the sun. Quito sits on the equator, where the zenith passage occurs on the equinox.
- One of Tupac's most famous battles in Ecuador was a naval campaign in which he took an army of 20,000 balsa rafts to conquer islands in the Pacific. He took them by surprise after laying low for more than a year.

The *Acllahuasi*

- Every year, Inca officials would search the empire for girls aged 8 to 10, chosen for both beauty and talent. They became special servants of the Inca, educated at the capital, and kept as virgins locked away in temples. These women were trained to make textiles and chicha beer for the ruler.
- As they grew older, some of the women were given away as prize wives to nobles who had performed some service for the Inca. Others were sacrificed. The famous Inca mummy Juanita may have been one of these chosen women.
- These women lived in an *acllahuasi*, or “chosen women house.” Such houses were not only in Cuzco but in every major town in the empire. There were several thousand chosen women reported at Spanish contact.

The Reign of Huayna Capac

- By the reign of the 11th Inca, Huayna Capac, the empire had been well established. This leader spent much of his life inspecting his lands and consolidating Inca control by creating an administrative infrastructure; he died of smallpox in 1528.

- Most of Huayna Capac's early career was spent in the northern part of the empire, subduing the people of Chachapoyas on the eastern slopes of the Andes.
- By this time, the Inca Empire had reached its height of perhaps 10 million people.
- Huayna Capac consolidated the borders by approaching villages of 5,000 or 10,000 people with his army of 200,000 and inviting them to be part of the empire. Not surprisingly, this invitation was often accepted.

The Arrival of Europeans and Disease

- In either 1524 or 1525, an attack on the Inca southern outposts at the edge of Bolivia's Amazon was reported. This was an attack by Guarani Indians from the Amazon, but they were led by Aleixo Garcia, a Portuguese explorer.
- The Guarani had told Garcia of the riches of the Inca, but they became outraged when Garcia launched a raiding party and stole Inca silver. They killed Garcia and his men but spared his son, who is thought to be the first mestizo in South America.
- As Garcia was leading his raid in Bolivia, airborne infectious diseases from Europe were sweeping like a storm down from Central America.
- Huayna Capac's northern troops reported sick and dying people everywhere. Both Huayna Capac and his heir designate died of smallpox in 1528.

Chaos and Civil War

- The sudden death of Huayna Capac and his heir left the empire in chaos. The throne was claimed by two of Huayna Capac's sons: Huáscar and Atahualpa.

- Atahualpa was descended from the female line of Pachacuti, and Huáscar, from Tupac Inca. Huáscar declared himself Inca from Cuzco, while Atahualpa installed himself as Inca in the newly conquered Quito.
- After four years of brutal civil war, Atahualpa captured Huáscar and brought him to Quito. He killed Huáscar's family in front of him before killing the leader himself and burning the mummy of his ancestor, Tupac Inca.
- Though Atahualpa was now Inca, his empire was ravaged by war and disease, and a threat lay ahead that would claim his life only one year later.

Suggested Reading

Cobo (Hamilton, trans.), *History of the Inca Empire*.

——— (Hamilton, trans.), *Inca Religion and Customs*.

D'Altroy, *The Incas*.

De la Vega (Livermore, trans.), *Royal Commentaries of the Incas and the General History of Peru*.

Guaman Poma de Ayala (Hamilton, trans.), *The First New Chronicle and Good Government*.

Longhena and Alva, *Splendours of the Ancient Andes*.

Moseley, *The Inca and Their Ancestors*.

Questions to Consider

1. Why did the Inca royal family fight so bitterly among themselves?
2. Had not multiple diseases accompanied the Spanish, would the Inca Empire have continued?
3. Can we compare Pachacuti to Alexander the Great? How are they alike or different?

The Inca—Gifts of the Empire

Lecture 20

Life for the typical citizen of the Inca Empire was characterized by an impressively organized system of give and take. Invitations to join the empire were not subtle; a large army would appear and offer villagers the choice of joining or being escorted to the borders of the empire. Once a community became part of the empire, a well-organized, hierarchical system of labor taxation was implemented, with each individual assigned tasks tailored to his or her age and ability. In exchange for this labor, communities received security, terracing and irrigation, public buildings, sophisticated roads, and even monthly feasts. This complex but efficient system allowed the empire to become wealthy and productive.

A Village Joins an Empire

- Let us imagine the life of a married man in a small town called Wasi, about to become part of the Inca Empire.
- This man is a farmer, tied closely to his family and neighbors by shared labor, resources, and close quarters on easily defended hilltops. The community labor is organized by the clan leader, and the clan leaders follow the direction of the town mayor, the *karakas*.
- One day, an army of 10,000 shows up and invites the inhabitants of the village to become members of the Inca Empire. If the village declines, the inhabitants are escorted days away to the borders of the empire.
- The *karakas* confers with the Inca and decides on behalf of the town to join the empire. The people can stay in their homes and live much as they always have. There will be new positions of leadership given out and a new system of community service: the *m'ita*.

Establishment of the *M'ita*

- A group of assessors arrives from Cuzco and interviews the population to determine skill and ability for work assignments. This census is taken back to Cuzco.
- People in the Inca world were not categorized by their age but their work potential. In fact, Andean people did not know how old they were or celebrate their birthdays. Babies were not even given names until toddlerhood.
- No one was really an adult until he or she married. Expected marriage age was adolescence. Once married, a person was considered of peak working age.
- Even the very young and very old were given work assignments appropriate to their levels of ability.
- Women, children, and the elderly worked within the communities. Men were sometimes assigned to work in faraway places for as long as required to serve the needs of the empire. While they were gone, their neighbors helped with their local duties.

M'ita Management

- Though it already has a tradition of community labor, Wasi is reordered into a decimal system of work groups.
 - The labor of perhaps 100 people is organized by one foreman, who is a member of a 10-foremen team that reports to an Inca official stationed at the village to supervise the work.
 - In one town, there may be 100 officials, each of whom reports back to Cuzco and organizes the distribution of the town's contribution.
- Farming continues as usual, though now the product is divided into thirds: one-third to the community, one-third to the empire, and one-third for personal consumption.

- In addition to food, ceramics and textiles are also produced in the communities and sent to Cuzco. Each region supplies items as its resources allow—wood products and feathers from the Amazon, for instance, or precious metalwork from the coast.
- Though in general the villages are happy with the mutual arrangement, there is some discontent with the seizing of community herds by the empire.

Benefits of Joining the Empire

- From all accounts, membership in the empire had many benefits, including protection from enemies, increased wealth, monthly public feasts, and a steady stream of public building projects. In addition, there was an almost universal end to hunger.
- Further, work crews would arrive from various parts of the empire to construct storehouses, agricultural terraces, and roads, improving the quality of life for village inhabitants.
- From a management perspective, the Inca were wise to send the men great distances to complete their assignments. The lack of distraction from family and personal responsibilities likely allowed the workers to focus more on their work.

Maintaining Local Identity through Textiles

- Textiles and clothing were important elements of identity in the Andes, even more so during Inca times.
- Each region had its style of clothing and design patterns, signaling the home of the wearer.
- Some scholars have suggested that there was actual language encoded in the weaving of the regional clothing. Names of places and towns may have been encoded and readable in the designs and patterns.

A New Sense of Security

- Another significant benefit for Wasi and other towns like it was that the citizens no longer had to worry about enemy attacks.
- As a result, they could and did spread out into the valley floors, away from the hilltop fortifications. Archaeological excavations confirm this change in settlement patterns.
- Each couple was given land when they first married, carefully measured to support themselves and a growing family. This allocation was done analytically, with consideration given to the fertility of the land and the resources available.

Feasts and Festivals

- The Spanish chronicles recount that almost every month, huge parties were thrown in every Inca town, thanking the people for their work. Surplus food supplies were shared, gifts were given, and good workers were publicly recognized.
- Archaeology has found hundreds of serving vessels in the public structures of small towns. Those public buildings, and the serving vessels themselves, were gifts of the Inca Empire.
- These feasts continued the longstanding cultural traditions of cultures in Nazca, Pachacamac, and Chavín.

Terraces and Irrigation Systems

- One of the main tasks of the work crews was to build agricultural terraces into the hillsides. Thousands were built across the empire. Such villages as Wasi saw massive labor crews building terraces and irrigation systems in the hills around their communities. Corn and potatoes filled the landscape.
- The irrigation canals were massive works. Sometimes, there were dozens of kilometers of channels going up into the mountains to bring glacial runoff down for crops.

- The empire also terraced uninhabited land if it was suitable for agriculture, creating vast tracts of terraced hillside. The methods used for this effort were so effective that many of these terraces still exist and are still in use today.

Storehouses and Food Storage

- Storehouses, called *colcas*, were built in every town. They were always built into hillsides and were massive structures, constructed to hold literally tons of surplus food.
- The location of the *colcas* in high hillsides was partly to impress the community but also to control access, because the exposure and range of sight was much greater on a hillside. There was the additional benefit of strong winds on the hills, which kept the stores dry and cool.
- The Inca developed the world's first freeze-drying technique for long-term storage of potatoes. The potatoes were left out in the freezing air at night and in the daytime sun to evaporate their water.

Road Systems

- One of the most incredible and enduring achievements of the Inca Empire was the road system. More than 5,500 kilometers of roads were constructed, stretching from Ecuador all the way down to Santiago, Chile.
- In building these roads, the Inca often relied on roadways already in place from previous cultures—yet another way in which the Inca can be viewed as the culmination of progress that started well before them.
- Though they may have relied on earlier road systems, the Inca brought these roads to a new height of sophistication and expanded their scope to reach into every community of the empire. Work crews even paved the roads between communities.

- Some roads in the high mountains incorporated bridges, made of huge ropes, woven across deep ravines. Llamas were trained to cross them, but the Spanish horses would not. The rope bridge technique is still practiced in some South American communities.
- Along every major Inca road were built *tambos* (rest houses). *Tambos* had barracks for travelers and food supplies. They were also communication points for the system of runners the Inca used to relay messages.
- These roads and *tambos* were used primarily by the Inca armies to monitor and control the increasingly large territory of the empire. Easy and quick access to member communities was vital to maintain stability and control.

The Inca Military

- The Inca military was an army of farmers led by a few trained soldiers. The farmers were men fulfilling their *m'ita* labor obligations. The army could be 100,000 to 200,000 strong.
- The leaders of the army were usually relatives of the Inca. Depending on the campaign, the leader might even be the Inca himself.
- The peasant soldiers were expected to bring their own weapons, armor, and uniforms. Often, soldiers in an Inca army were not all dressed the same. In fact, the variety of regional dress in the army may have served as a comforting sight to villages approached by the forces.
- Wives of the soldiers could travel with their husbands. Part of a woman's *m'ita* service could be specifically to feed and clothe her husband.
- Llamas and alpacas were essential to the army because they could be a food source, they could provide materials for clothing, and they could also serve as beasts of burden. Thousands of them traveled with the army.

Palace Construction

- Another important *m'ita* activity was the construction of Inca palaces. Much of Cuzco's cyclopean walls were built with *m'ita* labor, as were the walls at the Coricancha and Sacsahuamán.
- These elaborate palace projects were assigned partly to keep the vast and growing labor force at work, because idle hands can soon become a threat.
- Machu Picchu was also built by *m'ita* labor forces. Machu Picchu has been called a city, but in reality, it was one of many royal residences built for Pachacuti Inca.
- These palaces were indeed special, with beautiful, sophisticated architecture. But they had very small permanent populations. Only servants lived there year-round, though there is no doubt that when the Inca came, he brought an enormous entourage with him.



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Machu Picchu is often misunderstood as a sacred city, but it is almost certain that it was a summer palace for Pachacuti.

- The palaces also had temples to the sun where the king could worship. Although we might think that a temple would denote a city rather than a palace, these temples were usually built for the specific use of the Inca.
- There were also extensive terraces for food—far more than would be needed to supply the palace even at peak occupation. These were most likely for show, to underscore the wealth of the empire and the ruler.

Suggested Reading

Cobo (Hamilton, trans.), *Inca Religion and Customs*.

D'Altroy, *The Incas*.

De la Vega (Livermore, trans.), *Royal Commentaries of the Incas and the General History of Peru*.

Guaman Poma de Ayala (Hamilton, trans.), *The First New Chronicle and Good Government*.

Longhena and Alva, *Splendours of the Ancient Andes*.

Moseley, *The Inca and Their Ancestors*.

Trombold, *Ancient Road Networks and Settlement Hierarchies in the New World*.

Questions to Consider

1. Why were the people of South America so willing to join the Inca Empire?
2. What other ancient cultures, besides the Inca, did so much to provide for their people?
3. What did the Inca do so right to be virtually the only culture in world history to eliminate hunger?

The Khipu—Language Hidden in Knots

Lecture 21

In this lecture, we explore one of the technologies that made the complex but efficient Inca system function: the khipu, a knotted string device used to record information. Primary sources tell us that khipus were created and read by multitudes of scribes known as *khipucamayuqs*. Unfortunately, the practice of knotting khipus disappeared within 50 years of Spanish contact, but chroniclers and modern scholarship have allowed us to decode the decimal positioning system and knotting categories used for accounting. What remains unknown is whether khipus also constituted a written language. Several factors suggest that they did, but we have yet to find the information we need to decode this language.

The Khipu—Accounting or Writing?

- A khipu, from the Quechua word meaning “knot,” is a knotted string used by the ancient Inca to record a variety of information, such as accounting data, a population census, histories, poetry, sets of instructions, or anything else that could be recorded in a normal document.
- The Egyptians had papyrus, Mesopotamians had clay tablets, and the Inca had khipus. But khipus are a writing medium so foreign to the Western world that many scholars hesitate to accept them as true writing.
- Some scholars believe that they are simply accounting devices, while others believe that they constitute a true writing system. It seems unlikely that an empire like that of the Inca could have been managed without some kind of writing system.

The *Khipucamayuqs*

- The people who knotted khipus were called *khipucamayuqs*, and they were important members of Inca society. They were chroniclers, scribes, accountants, and messengers.

- Each Inca-dominated community had multiple *khipucamayuqs*, sent there from Cuzco to maintain accounting records and census information.
- Multiple *khipucamayuqs* in each community meant that records were more likely to be honestly reported. Any discrepancies led to an audit.

The Chaski

- The Chaski were runners who took khipus across the Inca world via the road system.
- The Chaski were based in the *tambos*, or rest houses, along the roads. They would run the wrapped khipus sometimes up to 20 kilometers to the next *tambo*, where another Chaski would take it further.
- This running system was so efficient that the Inca could order fresh fish in the morning and have it delivered to him from the coast by dinnertime.

Primary Accounts of Khipus

- We know about the khipu almost exclusively from Spanish chroniclers. The practice of knotting khipus was gone within 50 years of Spanish contact, so the window of opportunity for a chronicler to have witnessed it was relatively fleeting.
- Our first account of a khipu was written in 1532 by Hernando Pizarro, the brother of Francisco Pizarro. He witnessed khipus being used as an accounting record of storehouse contents.
- In the 1540s, Cristóbal de Molina wrote of an extensive library of khipus in Cuzco that recorded more than 500 years of Inca history.
- In the 1550s, Pedro de Cieza de León and Garcilaso de la Vega both told of khipus being used as mnemonic devices, with rhymes being taught to small children to help them decode the numbers.

- In 1555, Agustín de Zárate, a Spanish accountant, discovered that the khipu used a decimal positioning system, with colors denoting different categories.
- In the 1570s, a priest named Francisco de Toledo gathered together all of the remaining *khipucamayuqs* and had them read all of the khipus he could find. He put together a detailed history of the Inca from the reading of these khipus, then had the khipus burned and the *khipucamayuqs* executed.



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Today, there are about 600 known khipus, spread out in museum collections around the world, but what they mean is still largely unknown.

Rediscovering the Khipu Number System

- In 1923, a man named Leland Locke rediscovered the keys to reading the numbers and the mathematics of the khipu knot system. Locke simply read the accounts from the chronicles and followed their instructions.
- He found that the khipu used a base-10 positional system, with knots moving up the strings in positions denoting 1s, 10s, 100s, 1000s, and so forth. This type of system is especially suited to mathematics.
- Loops in each position were knotted with the appropriate number of knots for that position. Zero was included as a blank spot; it was an important mathematical concept that had been rejected by the Europeans until the 1500s.
- The top cords of the khipu included the totals for the strings. This was an important piece of verification for Locke.

- No new studies occurred until the 1970s, and even today, there are very few studies about the khipu. Modern studies have taught us about khipu structure and the complexity of its many variables. Gary Urton of Harvard has been the driving force in khipu studies over the last two decades.

The Structure of the Khipus

- The base element of the khipu is called the primary cord. It is a thick cord from which all the other cords dangle.
- On either side of the primary cord is an end knot, with a dangle cord that would also have knots—perhaps designating a title. The khipu was meant to be read from left to right, and the end knots signaled the beginning and end of the document.
- The cords that hung down from the primary cord are called pendant cords, and the cord that looped them at the top is the top cord, which as Locke found, confirmed the totals of the pendant cords.
- The pendant cords sometimes had cords hanging from them, as well. These are called subsidiary cords. It was possible for subsidiary cords to have their own subsidiary cords.
- The knots were positioned so that each numerical position occupied a horizontal row across the length of the document. It took quite a bit of skill and forethought on the part of the *khipucamayuq* to create straight horizontal rows across many pendant cords.

Knots and Colors

- Specific knots were used for different kinds of numbers, including long knots, short knots, and figure-eight knots.
- The long knots were found only in rows that signified the 1s position. All numbers in this row were made with long knots except for the number 1, which was made with a figure-eight knot to distinguish it from the number 10. Short knots were used in the 10s row so that there was clear delineation between rows.

- Both Garcilaso and Zárate indicated that colors stood for categories. Black cords stood for time; red cords, for warriors; white cords, for silver; and yellow cords, for gold. According to Garcilaso, a cord that was a combination of blue, white, and yellow, symbolized the sun god.
- Although we are not sure whether those categories are accurate, it is true that there are many colors in the khipus, and these colors would have been useful in denoting a variety of content divisions. One can tell just from a cursory glance that the colors were used to mark separate data sets, whatever the categories may be.

Spaces and Twists

- The spacing and the order of the pendant cords was also a useful tool to organize information, and we see a good bit of variety in the way that the cords were spaced along the primary cord.
- These spaces could have been data markers themselves or could have been used to separate groups of data.
- There were two possible ways for the cords to be twisted: S-ply or Z-ply, depending on whether the *khipucamayuq* knotted to the left or right. The pattern of these twists has suggested to Urton that the Inca may have used a binary code to organize information.

The Khipu Database Project

- The Khipu Database Project is run by Gary Urton at Harvard University. He has collected seven points of data for more than 400 khipus in his database.
- The data points are variables, such as cord construction, material type, cord color, cord groupings, knot types, knot clusters, and numbers of pendants and subsidiary cords.
- The data points are run through a computer program to search for patterns and similarities. The database is kept online at <http://khipukamayuq.fas.harvard.edu/>.

- One of Urton's greatest successes so far has been the discovery of khipus at the site of the Chachapoyas. Based on Urton's analysis, one specific long khipu may be a two-year census from the community.
- Urton notes that two-thirds of the corpus follow the rules of math, but one-third does not. What does this remaining third contain?

Argument for a Written Language

- Colors and numbers, as we know, can represent spoken words. We often use both in our current society to convey information.
- There are four main points to the argument that khipus represent a written language instead of a mnemonic device.
 - Most of the information sent back to Spain about the Inca Empire was acquired through khipus.
 - Thousands of runners handed khipus off along the Inca roads, giving only the briefest verbal messages. The court's *khipucamayuq* could then read those detailed messages. This system suggests a widely known standard of encoding.
 - There were entire storehouses at Cuzco containing thousands of khipus, and they were kept by just a few caretakers, who could read them all. That goes beyond mere memory, even with mnemonic devices.
 - Some chroniclers mention that songs or poems helped readers tease the data out of khipus. Perhaps there were standards of Inca grammar taught to small children, much like our ABCs.
- What is still missing is a device, something like a Rosetta Stone, to help us decode this language, and the possibility of such a device exists. In the 1540s, a friar had local *khipucamayuqs* encode rules and prayers into khipus and required villagers to carry them at all times. If one of these were found, it might provide the necessary information to decode the language.

How Old Is the Khipu?

- Many people assume that the khipu was an Inca invention, but that is not true. Khipus have been found in Chimu burials from 900 A.D. and in Wari excavations back to 650 A.D.
- In 2005, a khipu was found in Caral that is almost 5,000 years old. If khipus are writing, then Caral's example makes it as old as the world's oldest known form of writing.

Suggested Reading

Ascher and Ascher. *Mathematics of the Incas*.

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D'Altroy, *The Incas*.

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Quilter and Urton, eds., *Narrative Threads*.

Salomon, *The Cord Keepers*.

Urton, *The Social Life of Numbers*.

_____, *Signs of the Inka Khipu*.

Questions to Consider

1. Does it make sense that the khipu would be in Quechua when there were so many different languages in the Inca Empire?
2. Do you think there are enough variables within khipu strings and knots to contain a writing system?

Machu Picchu and the Sacred Valley

Lecture 22

This lecture focuses on one of the most well-known archaeological sites in South America, Machu Picchu. Its grandeur has given rise to the idea that this site was once a city, but it was more likely a summer palace of the ruler Pachacuti. The numerous astronomical features at the site suggest not only the typical Inca reverence for the sun but also worship of the moon and the Milky Way. A vast collection of objects excavated by Hiram Bingham in 1920 was kept in secret for decades at Yale but has since been returned to Peru as national treasures.

The Palace of Pachacuti

- Machu Picchu was a royal estate, much like the palace at Versailles. Thousands of laborers shaved off a mountaintop and created an architectural complex that today, 600 years later, still captures our imaginations.
- Machu Picchu was built for Pachacuti in the mid-1400s. As the estate of the son of the sun, it was a sacred place, but no more so than any other place where the Sapa Inca dwelled.
- There are not nearly enough residences to qualify Machu Picchu as a city. No more than a few hundred people, most likely staff, could have lived there at one time.
- Looking at Machu Picchu from the perspective of the chronicles, the complex was most logically a summer home of sorts for Pachacuti.

Entering Machu Picchu

- To get to Machu Picchu today, most people take a train from Cuzco for four hours and then a bus up a hairpin, winding mountain road. It is possible, however, to run the road from Cuzco to Machu Picchu in about three and a half hours. The Inca Chaski could likely have done it in a shorter amount of time.

- The Sun Gate's arch and the rooms that flank it have partially fallen over. Still, one can see from the height of the central doorway that it was tall enough for the Inca to have entered atop his litter, with 6 to 10 servants carrying him.
- The first structure one arrives at is the guardhouse, given that name because of its commanding view of the complex. Next to the guardhouse is a wide, flat area, where Bingham found the majority of the burials that he uncovered during his three seasons of excavation.
 - Of the 173 burials that Bingham found, he determined that more than 150 of them were women, leading to the conclusion that Machu Picchu was a cloister for the chosen women.
 - Bingham's analysis later proved to be wrong. The bones were of normal age and gender distribution.
- As you follow the royal causeway down to the rest of the architecture, you descend through the middle of wide terraces and a central gate. Once through this gate, you are properly in the complex.
- The rooms you walk through at first are of indeterminate function, perhaps storage rooms, barracks, or workshops. Bingham found this area very clean, as if the abandonment had taken everything with it.

The Quarry and Inca Stonework

- Off to the left is what is known as Machu Picchu's quarry, a large area of natural outcrops and jumbles of stones. The quarry is in a seemingly odd place, right in the middle of the complex. Archaeologists interpret its presence as proof that Machu Picchu was still a work in progress when it was abandoned.
- There is a stone there that seems to be in the process of being split, with holes drilled in a line along its face. We believe that sticks were inserted into these holes and then wet down with water. As they expanded, the force of the sticks together would break the stone.

- There are also examples in the Machu Picchu quarry of how stones were shaped. They were broken out with hammer stones and shaped with thousands of percussion strikes against the surface.
- The current theories hold that log roller systems were placed underneath large stones and pulled by many men with ropes; however, this system may not have been used in a mountainside quarry, such as Machu Picchu.

Astronomical Features

- If a building has an astronomical alignment and we can detect it and determine it, then we can say, at least in part, what the purpose of that building was. There are a number of such features at Machu Picchu.
- The strongest example of an astronomically aligned building at Machu Picchu is the Torreón, or the Sun Temple. With its unique capital D shape and oddly unfinished floor, it's clearly different from the other structures at the site.
 - There is a huaca underneath this structure, so it is clearly connected to the ancestors. And we know that this is the place of the son of the sun, the Sun Temple.
 - At dawn on June 21, the winter solstice, the light comes through one of the structure's two windows to line up with a carved line on the rough bedrock floor. The Torreón had to be positioned perfectly for the effect to work.
 - The second window in the Torreón seems to be facing toward the December solstice, although this has not been tested.
- At what many consider to be the heart of the site is a private courtyard surrounded by architecture built out of megalithic stones. On its eastern side facing the rising sun stands the Temple of Three Windows.
 - This structure, too, has been identified as a temple aligned with the June solstice, but it is not quite that.



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Symbolically, the Temple of Three Windows seems to recall the three caves, just south of Cuzco, from which the first ancestor Inca had emerged.

- Symbolically, it seems to be calling forth the image of Tambo Toco, the three caves from which the first ancestor Inca emerged just south of Cuzco. As a temple, it is connected with origins or, perhaps, birth and hereditary rights to rulership.
- The June solstice sun does not reach the proper alignment within the temple until about an hour after dawn. Its position at sunrise is about 5 degrees off. This corresponds more accurately with the major lunar standstill, which occurs every 18.6 years.
- It is possible that this is a temple to the moon, constructed to celebrate the wife of the sun and the mother of the son of the sun—the Inca queen.
- Another astronomical site is the Southern Cross Stone, so named because of its shape and the direction it points. It looks like a stone kite tilted up off the surface of the central plaza near the Temple of Three Windows.

- The tip of the Southern Cross Stone points generally in the direction of the constellation of the Southern Star.
- Some sources assert that the stone points to the Southern Cross every May, but it is unlikely that this was the case during Inca times. The slow progression of the equinoxes means that the constellation was 8 degrees off of where it is today when Machu Picchu was built.
- An additional complication is the shift in the night sky throughout the night. It is impossible to tell at what time of night the Incas would have been referencing the sky.
- One final astronomical feature is the Intihuatana. It is called the Hitching Post of the Sun, after a similar object at the site of Pisac for which chroniclers had a name.
 - The Intihuatana is a rectangular stone that sticks off of a flat, rectangular stone platform. The Inca said that it would hitch the sun at its farthest points on the solstice to keep it from flying off the horizon.
 - There is little left of the structure around the Intihuatana to give us clues about how it was aligned. It may have been in shadow for all days except the summer and winter solstices.

Importance of the Milky Way

- In the Andes, the Milky Way is much brighter than it is in the United States. The Inca, uniquely in the ancient world, were able to see constellations in the Milky Way, which they called “dark cloud” constellations.
- The Milky Way was envisioned as a river running through the sky, a road connecting the earth to the heavens.
- In Quechua, the name for Milky Way is Wilka Mayu, the same name given to the Urubamba River. There was likely a symbolic relationship between the terrestrial and the celestial rivers.

- In June and December, the Milky Way forms a cross with the sunrise and sunset points of the solstices. This positioning is still important to the Quechua people, influencing their agricultural practices and the arrangement of their communities. It may also symbolize the quartering of the Tawantinsuyu Empire.

The Discovery of Machu Picchu

- Hiram Bingham was an American, born in Honolulu, and a professor of history at Yale University. While in Peru researching Simón Bolívar in 1909, he heard a legend about a lost city full of Inca gold.
- Bingham went back to the states and acquired funding for an expedition. He returned to Peru in 1910 to hunt for what he promoted as the “Lost City of the Inca.”
- After finding the disappointing ruins of Vilcabamba, Bingham followed a lead telling of a mountaintop city near Cuzco. A boy from a nearby farm led Bingham to Machu Picchu.
- It is now clear that Bingham was not the first Westerner to discover Machu Picchu. There were missionaries and even multiple European explorers who saw it much earlier. German businessman Augusto Berns has now been identified as the first, in 1867, 44 years before Bingham showed up.
- Bingham returned the next year and conducted three seasons of excavations. According to shipping logs, he sent 74 boxes back from Peru to Yale, including almost 5,000 objects. Yale kept these objects hidden until 2010, when it finally published a detailed list and sent the items back to Peru, their rightful home.
- Regardless of how it was found, for many people the beautiful architecture at Machu Picchu represents the height of Inca civilization.

Suggested Reading

Burger and Salazar, *Machu Picchu*.

De la Vega (Livermore, trans.), *Royal Commentaries of the Incas and the General History of Peru*.

Guaman Poma de Ayala (Hamilton, trans.), *The First New Chronicle and Good Government*.

Helper Arguedas, *Discovering Machu Picchu*.

Longhena and Alva, *Splendours of the Ancient Andes*.

Moseley, *The Inca and Their Ancestors*.

Urton, *At the Crossroads of the Earth and the Sky*.

Questions to Consider

1. Why would the Inca need estates like Machu Picchu across the empire?
2. What would sky watching give the Inca? Why was astronomy important?
3. Do you believe that the massive Inca stones were moved with ropes and log rollers or in some other way?

Spanish Contact—Pizarro Conquers the Inca

Lecture 23

This lecture traces the rise of Francisco Pizarro and the subsequent fall of the mighty Inca Empire at his hands. Pizarro was the uneducated son of a Spanish soldier, but he was a strong warrior and rose quickly through the ranks of the conquistadors. His discovery of riches along the coast allowed him to gain permission from the crown to conquer and convert the Inca. After a minimal attempt at conversion, Pizarro captured the Inca Atahualpa, holding him for ransom before executing him. Pizarro established control over the diseased-ravaged Inca population, maintaining it through the rebellion of Manco Inca. His betrayal of his partner Almagro led to his eventual assassination, but not before the Inca Empire was irretrievably lost.

The Rise of Pizarro

- In the year 1532, a group of 168 men conquered an empire of 10 million people. Perhaps no event in world history changed the lives of so many so quickly and profoundly. But the process started much earlier.
- Vasco Núñez de Balboa fought his way through the Darien Gap in Panama in 1513, becoming the first conquistador to see the Pacific Ocean. Among Balboa's men was a young soldier named Francisco Pizarro.
- Balboa was accused of trying to seize power and was arrested by none other than Pizarro. He was convicted of treason and beheaded in 1519. As a reward for his service, Pizarro was appointed the mayor and magistrate of Panama City, remaining at that post until 1523.
- Pizarro was born the illegitimate son of a Spanish soldier in Trujillo, Spain, sometime around 1470. Despite his lack of education, he was a strong soldier and an inspiring leader of men.

- Stories of the rich kingdoms to the south inspired Pizarro to launch his first major expedition with two partners in the year 1524. They launched multiple unsuccessful expeditions from 1524 to 1527.

Discovery of the Inca

- In 1528, one of these expeditions captured a raft off the coast of Ecuador carrying gold, silver, fine textiles, and pottery. The locals confirmed that there was much precious metal in the area, as well as many llamas. The llamas were an important find because they could be used as beasts of burden.
- This meeting netted Pizarro some important advantages: knowledge of the Inca civil war; interpreters, especially Felipillo and Martin, who would be his voices to Atahualpa; gold and silver as proof of his discovery; and a foothold from which to launch his next assault.
- Pizarro was denied permission to launch an assault on the Inca by the governor of Panama. However, he was granted permission by the Spanish queen of Charles I, Isabella.
- When Pizarro returned to the coast in 1531, he found the town of Tumbes in ruins, ransacked by its enemies. He moved further down the coast to establish a base camp.

Luring Atahualpa

- By the summer of 1532, Captain Hernando de Soto arrived with enough men for Pizarro to make his move. De Soto was sent on a reconnaissance mission of the area and returned with an envoy from Atahualpa himself, carrying gifts for Pizarro and an invitation to meet.
- Pizarro and his men set out into the Andes to meet the Inca at the town of Cajamarca. They arrived first, and Pizarro made a plan to ambush Atahualpa. He sent a party led by de Soto and his brother, Hernando Pizarro, to convince Atahualpa to come alone.

- Martin translated as de Soto offered a ring as a gift and invited the Inca to Cajamarca for a private meeting. Atahualpa ignored de Soto, but he acknowledged Hernando when he learned he was Pizarro's brother.
- De Soto and his men made a short demonstration of trick horse riding, which pleased the Inca. They declined a dinner invitation and left, unable to lure Atahualpa to Cajamarca alone.



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Pizarro never went to school and spent his early life as a pig farmer but became a strong and inspiring leader.

The Ravages of Disease

- The Inca Empire was in chaos at this time after the death from smallpox of Atahualpa's father and his designated heir.
- The first reports of native illness began in Mexico in 1519; disease then spread like wildfire. By the time Pizarro had launched his mission, the native population of Panama was so decimated that the Spanish were importing black slaves as labor.
- Medical historians estimate that two-thirds of the population died in the first 50 years of contact. Some estimates go as high as 90 percent. By 1532, millions of people had died, including many of the nobles in Cuzco.
- To the people of the Americas, all illness was an attack from the supernatural world, not a physical condition. To have so many ill was seen as a sign that the gods were displeased.

- Lecture 23: Spanish Contact—Pizarro Conquers the Inca**
- The wave of illness demoralized the people, who felt abandoned by their religion, and led to a willingness to be baptized into Christianity.
 - Ironically, the contamination of baptismal water resulted in a faster and farther spread of disease. Because the germ theory of disease had not yet been discovered, the European priests had no idea that they were compounding the problem.
 - Disease was not the only mass killer. Tens of thousands of Inca soldiers died in the clash that occurred when Huascar led his troops to Ecuador to subdue his brother, Atahualpa. Huascar was unsuccessful and was sent in chains back to Cuzco.

The Capture of Atahualpa

- Atahualpa's victories over Huascar and other hostile parties gave him a strong sense of confidence as he was carried to meet the Spanish at Cajamarca on the morning on November 16, 1532.
- Knowing that there were fewer than 200 Spaniards there, he left the bulk of his 100,000-man army outside the city, entering with only a few thousand personal guards and some high-ranking nobles to witness his victory.
- He was met by a single Spanish friar with a Bible. The Crown had ordered Pizarro to convert the natives, not execute them, and this was Pizarro's cursory gesture.
 - The Crown and the Catholic Church were closely tied in Europe, and they sought to maintain that shared power in the New World.
 - A new population of millions of natives meant a new opportunity to grow (and enrich) the Catholic Church.
- Atahualpa threw the Bible to the ground, giving Pizarro all the excuse he needed. Spaniards appeared from corners and doors, and

a canon was fired into the Inca's guard. Atahualpa was captured at knifepoint by Pizarro himself.

- According to chronicles, the Inca lost as many as 7,000 men trying to lay siege to the town and rescue their ruler, but the conquistadors were well dug in. On fear of execution, Atahualpa ordered an end to the attack.
- The Inca sent Chaskis to fulfill Pizarro's ransom demand for a room full of gold and silver. Even when the ransom was paid, however, Atahualpa was not released. Pizarro kept him for eight months, using his protection to search the Andes for more wealth.
- In the winter of 1533, under protest of his men and brothers, Pizarro executed Atahualpa. He was to be burned at the stake, but at the last minute, he agreed to be baptized and, instead, was garroted.

The Establishment of Spanish Authority

- Pizarro installed Huascar's younger brother, Thupa Wallpa, as the new Sapa Inca. With that false authority, his forces entered Cuzco unopposed on November 15, 1533.
- Pizarro's men set about sacking the city. The Coricancha's gold was melted down. Temples and palaces were torn down and the blocks were used to build Catholic cathedrals. Any vestiges of Inca culture were replaced by Spanish culture.
- Thupa Inca died of smallpox later that year, leaving the throne vacant and Pizarro without a puppet ruler. But another legitimate heir and son of Huayna Capac, Manco Inca, a boy of only 17, accepted the position.

The Rebellion of Manco Inca

- Manco Inca enjoyed the benefits of being the titular Sapa Inca for a few years, but then guilt, shame, and humiliation brought about a change of heart. He escaped Cuzco and became the leader of an Inca rebellion.

- In 1536, he launched a coordinated army of *m'ita* laborers to expel the Spanish from Cuzco. He defeated the Spanish in the Sacred Valley at the fortress of Ollantaytambo. The magnificent victory involved changing the course of a river.
- At Cuzco, an Inca force of more than 200,000 burned the city and killed Pizarro's younger brother Juan in battle.
- Though Manco Inca's forces were victorious throughout the territory, they had one crucial weakness: They were primarily farmers who had to stop fighting to plant their crops. This delay allowed the Spanish to regroup and changed the momentum of the fighting.
- Manco Inca was forced to retreat, but he never surrendered. He built a fortress, called Vilcabamba, 200 kilometers downstream on the Urubamba River, which he maintained as the independent capital of the empire.
- The empire resisted the Spanish for decades until the last named rebellion ruler, Tupac Amaru, was captured and Vilcabamba was brought to its knees. Tupac was brought back to Cuzco, where he was executed.

Pizarro's Demise

- Pizarro's troubles began with the betrayal of his partner Almagro. Betrayal was a tactic he had been using since he turned on Balboa in Panama.
- When Almagro joined Pizarro in Cuzco, he asked to claim a share of the plunder. Pizarro gave Almagro everything south of Cuzco, an area that proved to be worthless. Almagro demanded Cuzco, but Pizarro denied his claim.
- Pizarro established a new capital called Ciudad de Los Reyes, now the modern-day city of Lima. When Almagro tried to take it by force, the relatives of Pizarro defeated his army and executed him in the summer of 1538.

- Pizarro claimed Almagro's lands for his own, leaving Almagro's conquistador son without land and bankrupt. Pizarro avoided an assassination attempt by Almagro's son but was eventually captured at his own dinner table and killed. Although Pizarro was 70 years old, it took repeated blows by several soldiers to kill him.
- Almagro's son was quickly captured and executed. Pizarro's severed head was placed in a box and buried under the main cathedral, where it was found by workmen in 1977. Pizarro's skull showed clear evidence of his gruesome death.

Suggested Reading

De la Vega (Livermore, trans.), *Royal Commentaries of the Incas and the General History of Peru*.

Guaman Poma de Ayala (Hamilton, trans.), *The First New Chronicle and Good Government*.

Questions to Consider

1. What were the factors that most led to Pizarro's successful conquest of the Inca Empire?
2. Do you see Pizarro as a hero, a villain, or something else in the annals of world history?
3. How important was Pizarro's strategy of installing puppet Incas?

Remnants of the Past—Andean Culture Today

Lecture 24

This final lecture explores the last resistance of the ancient Inca culture, then turns to the remarkable preservation of ancient traditions by indigenous people living in South America today. The Quechua of Peru still live much like their Inca ancestors, weaving textiles and planting crops on terraces. The Misminay rely heavily on astronomy in their practices, and the people of Tupicocha continue to use khipu in some ceremonies. The Aymara, the descendants of Tiwanaku, have achieved prominence in Brazil while respecting the traditions of their ancestors. The Amazonian tribes continue with shamanism and headhunting, and the many uncontacted tribes undoubtedly maintain traditions, as well. The future for ancient South American studies is hopeful, with much left to learn and discover about these fascinating civilizations.

The Final Inca Resistance

- Though the Inca Empire was effectively conquered by Pizarro, resistance continued for decades after his death.
- Manco Inca's rebellion led to the establishment of a new Inca capital at Vilcabamba. The people there were able to resist the Spanish for almost 40 more years, until the first viceroy of Peru, Francisco de Toledo, put Vilcabamba under siege in 1572.
- After the fall of Vilcabamba, the hope of a centralized Andean Empire was lost. Thus began a pattern of Spanish domination that would continue for more than 200 years.

Rise and Fall of Spanish Dominance

- To establish their dominance, the Spanish viceroyalty of Peru exerted control over the local leaders, called *curacas*, through gifts of land and wealth.

- The *curacas* used the existing *m'ita* system to extract gold and silver from the mines for Spain. The country was looted of its resources.
- In 1808, Napoleon invaded Spain and took the king, Ferdinand VII, hostage. The Spanish colonies, already tired of Spanish rule and working independently, took advantage of this moment and rebelled.

South American Independence

- The well-known liberator of South America was Simón Bolívar, who started in Venezuela and fought the Spanish out of many countries between the years 1812 and 1825.
- Peru was liberated by a lesser-known general from Argentina named José de San Martín.
- It was Bolívar's dream to form a single nation, but when regional leaders could not agree, he proclaimed himself the dictator of South America in 1828. He ruled for a little more than two years and then stepped down before dying of tuberculosis in 1830.
- The countries of the Andean region have gone back and forth between dictators and democracies, with a few indigenous rebellion movements along the way. The traditional way of life has never returned on a large scale.

The Quechua

- The Inca Empire may be long gone, but some people in the region still live in much the same way as they did during the contact period. These people are called the Quechua after their native language.
- Today, there are somewhere in between 10 and 14 million Quechua speakers, as many as there were in the Inca Empire. This is an impressive resurgence after the devastation of disease. In 1975, Quechua was proclaimed the second official language of Peru.



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The Copper Scroll, found in Cave 3, describes enormous sums of gold and silver hidden in the desert. Whether or not the treasure belonged to the sect is a matter of debate.

- The Quechua still farm corn and potatoes, often on the terraces that their ancestors built.
- Drinking chicha beer out of flaring-mouthed jugs is still in style, and people still pour the first sip on the ground to the Pachamama, or Mother Earth.
- Villages across the Andes are still divided into *ayllus*, paired groups of kin, who help one another in a rotating communal labor system. Much of the population of Cuzco and its surroundings still live communally, helping one another as needed.

Ancient Ways in the Colca Valley

- In the middle of the main town of the Colca Valley stands a statue of the mummy Juanita. The Inca worship of ancestors as members of the living community clearly remains.

- Every year on the June solstice, a parade called the Inti Raymi is held in Cuzco. Tens of thousands of Quechua people, from Cuzco and the villages of the region, represent their communities as they march up the Avenida del Sol and into the main plaza.
 - The people parade through the streets in groups ranging from 20 to 200, representing their villages and the work groups of Cuzco. The work groups are especially reminiscent of the Inca *m'ita*.
 - The parade goes on not for hours but for days. It culminates with the man currently proclaimed the Inca carried through the crowd and the sacrifice of a black llama.
 - The original Inti Raymi festival was held annually by the ancient Inca, but Manco Capac was the last Sapa Inca to lead it in 1535. The parade started in the 1940s as a theatrical performance but has since been embraced by the Quechua as a true celebration of their culture.

The Study of Misminay

- Gary Urton, now a professor at Harvard, became interested in the people of Misminay during his dissertation research. These people were farming in traditional ways and organized in *ayllus*, but there were other aspects of ancient origin that piqued his interest.
- The village is divided into four quarters, like the old empire of Tawantinsuyu. The roads that divide these quarters are oriented toward the winter and summer solstice points.
- Their agricultural cycle is followed by watching the movements of the Milky Way, called the Wilka Mayu. They watch for the Milky Way just before dawn and wait for it to line up with the orientations of the roads.
- Urton also recorded a great knowledge of constellations, the same constellations recorded at Spanish contact. These included the dark constellations in the Milky Way.

- The Misminay are especially interested in the Pleiades, whose brightness signals for them the rainfall in the coming year.
- Climatologists have discovered that El Niño patterns do, in fact, affect the perceived brightness of stars; thus, the correlation seen by the Misminay is borne out by science.

The Khipus in Tupicocha

- In the 1990s, Frank Salomon discovered ancient khipus being kept by the tiny community of Tupicocha.
- Though no one in the town could read the khipus, they were used as sashes for the office of *ayllu* leaders and called *quipocamayos*. It was said that they contain the community's laws and instructions for how the leaders should organize labor and inventory tools.
- The community knew what khipus were once for, and one particular boy in Tupicocha showed great insights into how they might have been read.
- No one in Tupicocha could tell Salomon how old the khipus are. Town records mention them at least as far back as 1890, but frequent repairs have made them difficult to date.
- Regardless of their antiquity, the khipus of Tupicocha, as well as more rudimentary knot techniques in other communities, demonstrate a clear effort on the part of a Quechua community to retain non-European cultural traditions.

The Aymara People

- The Aymara people live mainly around Lake Titicaca, though there are pocket communities all over the Andes. They are commonly thought to be the descendants of the people of the great city of Tiwanaku.
- The people have a long history of rebellion against oppressors, and in modern times, their population has thrived.

- In 1959, an Aymara rebellion in Bolivia brought agrarian reform and freed many Aymara from servitude on corporate farms.
- In 2005, Bolivia elected its first Aymara president, Evo Morales. As of 2012, he remains in office.
- The Witches Market section of La Paz sells many traditional Aymara goods, including herbal remedies and llama fetuses, which are buried in the corners of houses for spiritual protection.

The Uros People

- The Uros are a very traditional group of indigenous people, living on the north end of Lake Titicaca, near the city of Puno.
- They live on floating islands, made of the lake's totora reeds. They have been living on these floating islands since Inca times.
- The current communities live anchored near the shore, but the ancient community would float across the lake to avoid domination.
- After 2000, churches built on top of pontoons were floated out and attached to the Uros islands. The community is converting to Christianity and may quickly lose its traditions.

Pre-Columbian Traditions in the Amazon

- There are more uncontacted people in the Amazon than in all of the rest of the world put together. Brazil alone may have 67 uncontacted tribes. Peru, Bolivia, and Colombia have several, as well, and Ecuador has a forbidden region where no one, not even researchers, is allowed to go.
- We know that shamanism exists among the Amazonian tribes.
 - We know that the shamans believe they can visit the spirit world and transform into jaguars.

- We know that shamans are also healers who use hallucinogenic drugs to see the spirits that cause illness and speak to the spirits of the plants to prescribe medicines.
- We also know that warfare and headhunting still exist among the Jívaro and other tribes in Ecuador. Headhunting undoubtedly still takes place today in Ecuador's forbidden zone.
- The Desana of Colombia explain that there is one creator deity, Viho-mahse, and he has many spirits that are his creations and helpers. Some of those spirits are benevolent, while others are rogue and dangerous. Like all the ancient cultures we've studied in this course, the Desana believe there is only one true deity in the land of the jaguar.

Hopes for Ancient South American Research

- We should hope that the pace of discovery along the north coast continues as it has for the last decade. With the most recent research at Huaca Prieta suggesting that the main pyramid was begun as early as 5000 B.C., our assessment of Andean civilization is moving from being very old toward being the oldest city builders on the planet.
- We also have reason to be optimistic about khipu research. If we could break the khipu code, it would allow the Inca to come out of history and tell us in their own words who they were and what they thought.
- Finally, we should hope that archaeology in the Amazon continues. Now that we have found major habitation sites, excavations underneath may reveal much older levels of occupation. If they do, we may finally track the Fanged Deity back to his lair and learn why people along Peru's desert coast worshiped a jaguar god.

Suggested Reading

Reichel-Dolmatoff, *Amazonian Cosmos*.

Urton, *At the Crossroads of the Earth and the Sky*.

Questions to Consider

1. If you could be an archaeologist, what aspect of ancient Andean culture would you study?
2. Do you think the age of communication technology we are now in will help or hinder the preservation of indigenous culture?
3. Do you think the unknown cultures of the Amazon should be contacted or left alone?

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